THE TIMES
Higher Education
SUPPLEMENT

Evidence to science and technology sub-committee

V-cs split on payment of full student costs

by Alan Cane

Vice-Chancellors differed sharply among themselves over student fees while giving evidence to a parliamentary select committee last week.

Sir Brian Flowers, rector of Imperial College, London, and a former chairman of the Science Research Council told a sub-committee of the Commons Select Committee on Science and Technology that students should pay the full economic costs of their education.

"We do not charge proper fees for students at any level" he argued. "If we were to charge proper fees, which could be £2,000 a year, the situation in the universities would be a little easier."

Sir Brian pointed out that since most student fees were paid by local authorities, who were recompensed by central government, the increase in fees would be largely an accounting exercise. Students from poor countries could win studentships. Students with rich fathers or from rich countries would pay the proper price for their education.

Sir Brian's views, however, were shared by none of his fellow vice-chancellors at the meeting, and they do not represent the thinking of the Committee of Vice-Chancellors and Principals.

There was a second difference of opinion when Sir Samuel Curran, principal of Heriot-Watt University argued that only differential fees for technology students and arts students would halt the decline in student numbers entering science and technology. He said that the prospect of a career in technology was not at present an attractive one.

There was no support for this view from the other members of the CVCP team.

Sir Derman Christopherson said the universities would not wither away if the squeeze on Government money continued. He told the Select Committee "We shall look for money from other than government sources. We have had a considerable number of requests from OPEC countries and we do not want to give the impression that we are in despair and that if no more money comes we shall pack up. We will find expedients.

"But it will mean that we will do things that we do not regard as the most important either for this country or its educational system."

The vice-chancellors strongly supported tenure for university teachers, although they accepted that there was a serious promotion blockage in the offing. Sir Brian Flowers suggested that this could be overcome if the University Grants Committee were prepared to change the senior/junior ratio in the universities for a limited period.

Earlier last week, the Select Committee examined representatives of the Committee of Directors of Polytechnics.

Sir Alex Smith, director of Manchester Polytechnic and chairman of the CDP argued that involvement in higher education should be part of the price industry must pay for government aid.

"I am aware that the Government is making available large sums of money to industry and I suggest that as part of the deal, the supported industry should become involved in education through sandwich course placements or by releasing staff for course teaching", he said.

In a written memorandum, the CDP claimed that success rates for research grants in universities and polytechnics were now similar, as figures for 1973 for science and engineering excluding "big" science showed.

Polytechnic research was, however, only one twenty-fifth of the volume, in cash terms, of university research.

'Scots UGC a threat to research'

by David Dickson

The funding and organization of research would be "disastrously impaired" if devolution implied a Scottish university grants committee and research councils, according to the University of Edinburgh.

In a memorandum to the science sub-committee of the House of Commons Select Committee on Science and Technology, the university says that it could not operate effectively with such a small pool of scientists.

"However, local discussion to rationalize relevant aspects of research and development work is of value", the university adds.

The memorandum suggests that in an effort to maintain the long term viability of university research, the Science Research Council should consider offering tenure on its own staff to a small number of research staff in universities.

It also suggests that the research income of a university should be acknowledged publicly as one of the criteria for the allocation of UGC funds, both to and within the university.

"Unit costs, which merely measure the throughput of students, must not, by default, become the only statistics of relevance in the allocation of funds", says the university.

On short-term contract research the university says that it has had difficulty underwriting appropriate units, particularly since it is hard to persuade Government departments and industry to make proper provision for overheads, despite the guidelines set out by the UGC.

In a separate memorandum, postgraduate students at the university suggest that there should be an end to the selection of postgraduates by the class of their degree.

"The inexactness of this is surely demonstrated by the efforts which are made to circumvent it with the research assistantship system", according to the university's postgraduate committee.

AMA proposes 'more rational' approach to poly funding

by Mark Vaughan

A significant change in the financing of the polytechnics has been suggested by the Association of Metropolitan Authorities.

The plan, put forward by the AMA's education committee, stems from a growing desire to introduce a more rational approach to the funding of polytechnics. Authorities with polytechnics in their areas have been accused by those without polytechnics of extravagant spending. On the other hand, the L.e.a.s controlling the polytechnics have complained that those without did not understand the problems.

Miss Sheila Wright, chairman of the committee, said the new idea, if implemented, would establish reasonable "norms" of expenditure for the 30 polytechnics, which would be met from a central pool. Anything spent over and above this "norm" would have to be paid for by the individual l.e.a.

The Association of County Councils this week welcomed the proposal. A spokesman for the education department said: "The notion they have chosen as a possible solution to this complex problem holds the most likely chance of success.

"However, we have got to make sure that any system which evolves has the wholehearted consent and agreement of the l.e.a.s, the directors of the polytechnics and principals of similar institutions, as well as their governing bodies."

The Rev Dr George Tolley, principal of Sheffield Polytechnic, said he welcomed the move "if it reflects a desire to bring in an element of rationality". If it was a cost-cutting exercise, then he strongly opposed it.

"It will be extremely difficult to establish the norms, and it will be imperative to build sufficient flexibility into them so that the developing and successful polytechnics are not penalized. The danger in setting norms is to go for the lowest common factor—I think it is essential that growth points must be encouraged."

Dr Raymond Rickett, director of Middlesex Polytechnic, said he thought it was inevitable that norms must be established.

The AMA proposal will be discussed by the Council of Local Education Authorities before any action is taken.—*TES.*

Time and motion study boycott

Technical staff in Cambridge University's School of Biological Sciences have decided to boycott an investigation into the organization and workload of its assistant staff.

The investigation is being carried out by a study team set up to recommend ways to reduce assistant staff costs by 12 per cent as part of the university's policy to cut its work force.

The Cambridge University branch of the Association of Scientific, Technical and Managerial Staffs has instructed its members in the school not to cooperate with the investigating team.

The branch is demanding that a cooperative study of the complete university operation should be set up with both university and trade union representatives, and that economies other than staff reductions should also be considered.

In a statement issued last week, the ASTMS branch condemned the study team looking at the two faculties in the biology school as a "one-sided, short-sighted operation" which would reduce the service which the union's members would be able to offer to teaching and research.

The chairman of the university branch, Mr Keith Dyson, said that his members were only too ready to help the university to deal with its cash shortage.

"I regret that it has been necessary to instruct our members in the life sciences departments not to cooperate with the study team, but it is the only way to emphasize our wish to be fully consulted in these matters."

Mr Roger Bogg, the university's personnel officer, said on Tuesday that the School of Biological Sciences had offered to consult fully with all the trade unions involved in carrying out its study.

● The sit-in at Cambridge University's Senate House in protest over lack of nursery facilities was a deliberate and carefully planned operation, Professor Jack Linnett, the vice-chancellor, said this week.

In a statement authorized by the Council of Senate, Professor Linnett explained why the university agreed to further discussions with the Nursery Action Group in order to end the occupation.

He said as soon as the sit-in began on June 3 the registrary initiated certain legal procedures to obtain possession but the building could not have been cleared by this method until June 5, because of degree day. It was impossible to transfer the degree ceremony to another building, and it was doubtful if complex security arrangements could have been changed at short notice.

Professor Linnett said that after discussions between himself, the registrar, proctors and four members of the Cambridge Students' Union executive he agreed to use his good offices with the Council of the Senate to set up a working party in conjunction with the Nursery Action Group, and if desired, with representatives of university and town, to investigate setting up full-time nursery and creche facilities.

The students' union asked for an undertaking that no disciplinary action would be taken and assured the sit-in would not end voluntarily without that understanding. As a result of this the proctors agreed not to prefer charges in the university courts against anyone involved in the action.

Professor Linnett said the proctors made a condition of their undertaking that the sit-in organizers should hand them a list of departments and colleges of all those in the Senate House.

They later wrote to the university's senior tutors outlining the reasons behind this decision and claiming the Senate House invasion and subsequent sit-in were premeditated, deliberate, carefully planned and skilfully executed.

Row follows 'broken promise'

Students boycotted lectures and staff picketed the Queensway site of Middlesex Polytechnic on Tuesday in protest against the threatened redundancy of a 66-year-old lecturer, Mr Stephen Bodington.

The dispute centres round verbal assurances given by senior staff at the polytechnic four years ago to Mr Bodington that, although he was 62, he would have a five-year contract with the polytechnic to develop an interdisciplinary society and technology degree.

According to senior officials and the director, Dr Raymond Rickett, no such assurances were given. But according to Mr Bodington and the local branch of the Association of Teachers in Technical Institutions, Mr Bodington would have refused the appointment at the time if they had not been given.

Nearly 200 staff have signed a petition asking for Mr Budington, a popular lecturer, to stay. Staff and students were to picket the meeting of the polytechnic joint education committee at Wood Green civic centre this week.

Ms Madeleine Wahlberg, secretary of the Enfield branch of ATTI, said that the union were concerned about Mr Bodington's case because it showed that education cuts were beginning to affect people and that the directorate of the polytechnic was remote from the 15-site polytechnic.

Dr Rickett said he had personally investigated the case and taken two signed statements from senior staff which showed that no verbal assurances had been offered to Mr Bodington. "I feel I have taken every step possible and bent over backwards to help in this case. Last year I had the discretion to extend Mr Bodington's contract which I did but this time the power lies with the local authority.

Mr Mulley goes to bat on finance

Bristol at Lord Crowther-Hunt, Minister of State for Education and Science, going round softening up the universities for further cuts and economies and being full of half-baked ideas, there should be a full-scale inquiry into higher education. Mr Keith Hampson, an Opposition spokesman on education, declared in the Commons this week.

During a question on university teachers' pay he said a lot of unnecessary damage was done by not going to arbitration earlier.

Mr Fred Mulley, the new Secretary of State for Education and Science, strongly repudiated what Mr Hampson had said about the activities of Lord Crowther-Hunt. The Opposition must understand that when day after day they preached about the need for the most drastic and fantastic cuts in public expenditure, this could only be done by curtailing public spending in every sector of education.

The Government intended to get the cost of living pay adjustment of university teachers settled as quickly as possible.

Mr Mulley said he would need a lot of persuasion before he accepted that because of the valuable interchange of students between Scottish, Welsh and English universities, it would be either desirable or sensible to separate the university systems.

Asked if he was satisfied with the present arrangements for liaison between schools and universities, Mr Mulley said there was close and systematic contact between universities bodies and those representing the schools but he was always ready for look at suggestions for improving present arrangements.

College will not withdraw S Africa funds

The governing body of St Antony's College, Oxford has refused to withdraw the college's substantial investments in South Africa. The decision follows an earlier general meeting when a motion was passed urging the governing body to explore the most rapid policy of disinvestment.

Now a protest campaign has been launched at the college and a petition calling for the governing body to reconsider its policy has been drawn up with backing from seven senior members of the college, including one of the governing body.

The motion for disinvestment was rejected by 18 votes. There were no votes in favour, but six members abstained. The motion put forward by the triannual general meeting specifically recommended disinvestment of those companies cited by the Anti-Apartheid Movement. Mr Frank Bowden, a student, said the investments, which less than a year ago totalled £664,686, were profitable and that considerations of financial expediency militated against disinvestment.

The petition protesting against the governing body's decision claims the general meeting's recommendation was rejected hastily without proper discussion and investigation. It says the rejection has publicly identified St Antony's with refusing to dissociate itself from apartheid.

● It has been pointed out that the headline in our issue of June 13 should have read "Oxford College may withdraw South Africa investments" and not "Oxford College withdraws South Africa investments".

Ross quits PNL

Dr Walter Ross, chairman of the court of governors at the Polytechnic of North London, has resigned only a week after a committee to investigate the conduct of the director, Mr Terence Miller, was set up.

£1m Saudi contract signed

A £1m contract has been signed with the Saudi Arabian government to provide English teaching in two departments of a new university at Jeddah.

NEXT WEEK

How open is the Open University?

Bristol Poly . . . 10 years on

Profile of Alvin Gouldner

A-level and after

S. B. Saul reviews W. W. Rostow's new book on the economy

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Will university salaries escape Healey's axe?

by David Walker

University teachers could lose up to £16 a week if the pay code outlined on Tuesday by Mr Healey, Chancellor of the Exchequer, is applied quickly.

A pay freeze limiting settlements to 10 per cent could apply to the negotiations going on at present between the Association of University Teachers and the Government on the cost of living element to be added to the scales agreed for October this year. It could take up to £850 from the expected total increase.

A 10 per cent norm which, if applied, would mean the university teachers had once again been caught by changes in incomes policy would give a starting salary for lecturers of £3,055, for senior lecturers and readers of £6,421 and a professorial average of £9,772 instead of expected figures of £3,333, £7,005 and £10,660.

Senior university administrators believe the 10 per cent would almost certainly be added to the scales awarded recently by arbitrators and due to begin in October.

Officials at the Department of Education said the Government's White Paper, to be published during next week, would give guidance on whether negotiations would be affected by the proposed policy.

Mr Laurie Sapper, general secretary of the AUT, said the arbitration award to university teachers made it clear that the basic element was for 1974 salaries and the cost of living increase for 1974-75. Both parts of the package in other words were part of this year's "pay round" and as such could not be affected by Mr Healey's statement which proposed restraint during the next pay round.

Mr Sapper, who in recent weeks has watched the further education teachers settle their salary claim with haste, emphasized that negotiations on the cost of living element were going on now.

The DES will tell the AUT early next week how the negotiations fit into the Government's scheme.

Letters page 16

	Arbitration award from October 1973	Maximum 10 per cent income policy	Possible 20 per cent cost of living
	£	£	£
University Lecturer	2,778-6,050	3,055-6,655	3,333-7,260
Senior Lecturer/Reader	5,838-7,346	6,421-8,080	7,005-8,406
Professor (minimum)	7,501	8,251	9,001
(average)	8,884	9,772	10,660
FE Lecturer II (minimum)	3,279		
FE Principal Lecturer	5,940		
Head of Department, Grade VI	8,037		

Mulley supports expansion of part-time degree courses

by Staff Reporters

The Government disclosed this week that it is to discuss the expansion of part-time degree courses with universities and industry. Mr Mulley, Secretary of State for Education and Science, said: "I hope the University Grants Committee will encourage the universities to move in this direction, although it is only realistic to add that it cannot be done without some extra expenditure."

He added that Lord Crowther-Hunt, Minister of State overseeing higher education, would be starting the discussions shortly.

The Government's new thinking was revealed by Mr Mulley in a letter to Dr Keith Hampson, a Conservative spokesman on higher education. Dr Hampson, formerly a lecturer at Edinburgh University, had said that part-time degree courses were one way of achieving value for money from universities.

Mr Mulley, in his reply, added: "The greater use of university capacity, of laboratories in particular, could be realized by the development of part-time and evening only instruction.

"Twenty years ago some universities had quite a lot of part-time provision. One obviously must be careful that there would not be a dilution in the quality of degree courses, but from my own experience as a lecturer both staff and students would benefit enormously from having more mature students around them."

Nearly 27,000 students in universities in 1972-73 were studying part time, compared with 246,800 on full-time courses. There were 116,600 part-time degree students in colleges and polytechnics.

University spokesmen said this week that they were ready to consider any proposals carefully, although they pointed out that universities already catered for many part-time students. It was also emphasized that an expansion of part-time courses would add to costs, since universities would need more staff as well as books and equipment.

Dr Hampson said any extra costs would be more than offset by gains in productivity and in the maturity of students.

Lord Crowther-Hunt will be discussing part-time degree courses as only one item in the debate on priorities that he has initiated in several recent speeches.

● Universities will soon be forced to take in many more part-time mature students because of financial constraints, Dr John Lowe, head of Educational Structures at the OECD told a national conference on continuing education this week.

Universities had always been conservative and resistant to reforms, he said, but the notion of recurrent education was unthinkable without a general shift in emphasis from full-time to part-time education.

"For financial and other reasons, however, universities may now be willing to change their minds. It is significant that in Canada and the United States where there is a dramatic fall-off in enrolment, colleges are filling up with part-time adult students."

Only a firm financial commitment by the Government to adult education, with a policy of positive discrimination between different groups of people and different regions, would involve those in adult education who most needed it, he said.

The conference, held at Oxford for three days, was organized by a committee including representatives of the National Adult Education Organizations, the Open University, the broadcasting authorities, the TUC and the educational press. Mr Paul Fordham, director of extramural studies at Southampton University, was in the chair.

The theme was the social, political and economic constraints limiting access to continuing education, and it aimed to work out practical steps that could be taken to extend learning opportunities for adults.

Speakers included Professor G. Rehn, head of the Swedish Institute of Social Research at the OECD, and Dr A. H. Halsey, director of the department of social and administrative studies, Oxford University.

A full report of the conference will be published next week.

Government likes universities–official

The Government took pride in the achievements and high international standing of British universities both as centres of learning and as institutions providing many forms of vocational education, the Prime Minister said last week.

Speaking at the 10th anniversary dinner of the London Business School, he said that he knew very well that universities were having to face difficulties because of the economic situation.

"These difficulties affect the whole education service, not just the universities, in different ways," he went on. "I said in Newcastle earlier this year, and it applies just as much to universities as to schools and colleges, that this Government will spend as much as we can afford on educational provision, because we cannot afford not to.

"At the same time when additional resources are in short supply, it becomes essential to consider whether we are deploying what we have already to best effect."

Mr Wilson also echoed some of the ideas that have been aired recently by Lord Crowther-Hunt, particularly those on the balance between arts and science, student preferences and the needs of industry and commerce.

Professor R. J. Ball, principal of the school, said that it aspired to play its part in the wider world of management education.

"The nation's productive capacity depends on the skills of its managers, scientists and technologists", he said. "We cannot afford a shortage of these skills, and concern has been expressed about the numbers of students in the relevant courses of study who will be coming forward to meet industry's requirements.

"The balance between education in the arts and in the sciences and technology is, of course, something which always has to be watched with great care. This means taking an interest in the factors which determine student preferences; the resources available for the various broad areas of education and training; and the needs of industry and commerce for different forms of vocational education and training.

"It is important in all this that we do what we can to get the balance right.

Lord Plowden, chairman of the governors, said that there were now more than 300 full-time equivalent students at the school on more than 35 courses. There were 45 faculty members.

Text of Mr Wilson's speech, page 7.

Annan defends 'scandal poly' director

A strongly worded defence of Mr Terence Miller, director of the Polytechnic of North London, was made in a letter to *The Times* yesterday by Lord Annan, provost of University College, London.

Lord Annan said the polytechnic's affairs were a public scandal with its governors intimidated by a militant student minority and many members of staff terrorised into adopting a neutral role over student "brutality".

"From the time he was appointed Mr Miller has been subjected to brutal and brazen treatment by militant students and their supporters among the academic staff (some of whom openly champion disruption). He has been physically assaulted and his attempts to reestablished academic standards have been derided and flouted."

Full text page 36

Plans prepared to cut budgets by extra £520m

by Sue Cameron

Contingency plans for cutting education spending by a possible £520m or more over the next few years are now being drawn up by officials in the Department of Education and Science as part of a major review of public spending for the rest of the decade.

They are quite separate from the threat of cuts in the present economic crisis which could, even yet, lead to a further £50m cur in education spending for 1976-77.

Next year it is likely that education spending will be held down to the 1976-77 level, which would mean a nil growth rate.

If there is a nil growth rate then education finance will effectively be cut by £190m in 1977-78 and by a further £330m in 1978-79.

The biggest cuts could well be made in higher and further education. The student population will rise over the next few years but this would not preclude a cutback in this area being made as early as next year.

If the growth rate in higher and further education were halved from 1975-76 levels there would be a saving in current expenditure of about £80 million in 1978-79. The saving in capital costs could be almost as great.—*TES.*

Polys' student/staff ratios 'better than universities'

Comparative student/staff ratios for the universities and polytechnics for 1973-74 have been announced by Mr Mulley, Secretary of State for Education and Science. The ratio for full-time students and staff in universities was 8.0 : 1 and in polytechnics 5.8 : 1, he told the Commons. The substantial number of part-time students in polytechnics would make the overall ratio about 6.9 : 1.

THES publication

We apologize to our readers and advertisers for our failure to publish *The THES* last week due to an industrial dispute. Our enlarged issue this week includes most of the news, features, reviews and classified advertising that would have been published last Friday.

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Surrey rent strikers defeated in test case

Rent strikers at the University of Surrey have lost their unique court case, in which they were contesting the university's right to put up accommodation fees after the academic year had begun.

Their case was overruled by Judge Peter Solomon in Guildford County Court last week and they were ordered to pay outstanding accommodation fees totalling £10,617.50 plus costs of almost £3,000, but the students are now considering an appeal.

If the students do not lodge an appeal, they must pay within 14 days.

The rent strike began at the university last autumn, after accommodation fees were increased for spring 1975 from £4.60 a week to £5.75. The students were arguing whether during an academic year the university was entitled to increase the accommodation fees and to recover late payment fees of £5 from students who did not pay in a given period. This is the first time students have been taken to court on this issue. A total of 195 students were involved when the case began.

Mr Don Hoyle, 23, student union vice president at the university who was involved in the test case, said after the verdict: "I do not think the judgment does justice to the legal merit of our case, which has been backed totally by the National Union of Students which is going to pay our costs."

Summing up, Judge Solomon said this was a test case. He pointed out that the accommodation fee was highly subsidised and "no student has attempted to set out a case that comparable accommodation and services are obtainable outside the university either at or anywhere near the fees".

He said the university and students' union had agreed to a figure of £4.60 a week residence fees for 1973/74 in March 1973. "I find that if an economic charge were to be levied by the university, that sum of £4.60 would have to be increased by 50 per cent before the university broke even and still that would not include payment towards capital cost of residency", he said.

He felt the university had implied its intention to put up fees from early 1974, and held back solely because of the Government's rent freeze, introduced shortly after the Labour Party's election victory in February 1974.

The £5.75 increase decided by the university last November was a 25 per cent rise in line with the 25 per cent students grant increase effective from last October he said. It was introduced as soon as the Government lifted its rent freeze for student accommodation on December 31, 1974.

If students did not pay fees after a fortnight of term they had to pay £5 late payment. This allowed them a choice, and this was agreed by a staff-students residence committee in March, 1973 Judge Solomon pointed out. He felt sure Mr Hoyle was aware of that decision.

Thus he found the claim proved and gave judgement to the university for £62.50 owed them by Mr Hoyle, as well as for the other cases against students.

The outstanding accommodation fees would be paid to the university out of the union's rent strike fund.

● Sussex University, where the council has agreed that accommodation fees for 1975-76 should be £7 a week, is offering students a discount of £12.50 on fees paid a whole year in advance.

Adult students take over college

by Sue Reid

Students and teaching staff of Fircroft College, Birmingham, staged a lobby of MPs at the House of Commons last week in protest over the threatened closure of the college this month. Trustees of Fircroft ruled the college might close after students refused to recognize Mr Tony Corfield, the principal, and introduced their own education programme, ignoring the normal syllabus.

Troubles began at Fircroft, an adult residential college, earlier this year when Mr Corfield said tutors could not speak at an education meeting of staff and students. The 54 students went on strike and then introduced the new education programme, which included lectures in Marxism, and barred Mr Corfield from teaching. The programme ran for the final two weeks of last term and throughout this term.

The trustees agreed to let the students' programme continue until further notice but have now announced the possible closure, which is likely to be temporary, at the end of this term.

Mr Christopher Cadbury, chairman of the trustees said no final decision has been reached. It was impossible to make an important decision hurriedly and under the present pressures, with the authority of the principal challenged, his teaching barred and disorder in the college.

He claimed the students had rejected suggestions for a special education committee to be set up, with three student members, for the prime purpose of taking responsibility for the education programme.

"I still hope that we may find some way to continue the college on normal lines. If it is decided to close temporarily we hope the college could be used for some other worthwhile educational purpose while its long-term future is sorted out", he said.

"Any suggestion that permanent closure is being considered is completely unfounded."

But Mr Trevor Blackwell, one of the college's four tutors, has expressed scepticism about the term "temporary". "I think if the college closed down 'temporarily' it would never open again", he said.

Fircroft was one of only seven adult education colleges in the country and was unique in the adult education field because it required no entrance qualifications and students took no examinations.

Mr Blackwell said the lobby of MP's had been entirely successful. The deputation has seen 16 MP's who had promised to take up the issue with Mr Fred Mulley, Secretary of State for Education. Seven of the MP's had already written to Lord Crowther-Hunt, Minister of State for Education, asking for a special inquiry.

Birmingham Trades Council is asking the TUC to set up an inquiry and the Council for Academic Freedom and Democracy is to mount an investigation into the threatened closure of the college, led by Mr John Downing, CAFD chairman.

● Attingham Adult College in Shropshire is faced with the prospect of closure this year because of financial difficulties. Lord Boyne, chairman of the college governors says reserves will be eliminated by the operating deficit and the college will begin the next financial year with an overall deficit of £2,000.

During the past 18 months renewed approaches to local authorities apart from Salop County Council which provided £36,660 for 1974/75 had been unsuccessful except in one case, said Lord Boyne. The governors felt it would be unreasonable for them to attempt to carry on, or for the county council to make any special effort to assist them to do so, until the attitude of the Government was clarified or it was clear the urgency of the problem was realised.

Lord Bridgeman, another member of the governors, was expected to raise a question in the House of Lords this week outlining the plight of the college and many other adult education institutions like it.



From left: Professor Boorstin, Dr Blakemore, Lord Boyle.

Three Reith lecturers named

The BBC has named university people as the next three Reith lecturers.

The 1975 lecturer will be Professor Daniel Boorstin, of the Smithsonian Institute in Washington. He will be followed by Dr Colin Blakemore, the Cambridge scientist and youngest ever Reith lecturer. In 1977 Lord Boyle, the vice-chancellor of Leeds University, will speak.

Professor Boorstin is probably best known in this country for his book, *The Image*, a study of how the modern system of mass communication actually creates events and personalities.

A former Rhodes scholar, Professor Boorstin has taught at Cambridge University as an historian.

The 1976 lecturer Dr Colin Blakemore, of Cambridge University, is the youngest Reith lecturer ever. He is a fellow of Churchill College and has become known for his physiological and philosophical study of perception and the mind.

Lord Boyle of Handsworth is one of higher education's hardy annuals, having been Minister of Education before coming to Leeds in 1970. At present he chairs a salary review body looking at the remuneration of "top people", higher civil servants and judges, but not professors and vice-chancellors.

The BBC has announced the names so far in advance to give the speakers ample time for research and preparation. Professor Boorstin's title will be "America and the World Experience" and the lecture series which begins in the autumn will coincide with the start of the bicentenary celebrations in the United States.

● The BBC has supplied the academic world with another intellectual stimulus this week in the shape of Mr Huw Wheldon who has been appointed chairman of the court of governors of the London School of Economics.

Mr Wheldon, who is managing director of BBC television, is a former student of the LSE and was elected an honorary fellow four years ago. He was well known as presented of *Monitor*, one of the medium's most successful forays into presenting the arts to a wide audience. He succeeds the late Sir Morris Ffher in the position.

LSE opposes post-Murray reform bill

by Laura Kaufman

The London School of Economics this week stated that it was opposed to London University's plans to have a private Bill introduced in Parliament in the autumn to carry out the constitutional reforms disallowed by the Privy Council in May.

Professor Ralf Dahrendorf, director of the school, said: "The court governors and the academic board have empowered me to state publicly and privately that there should at least be a moratorium and a debate about what we need to do. The Bill should not go through this year.

"Previously there was a minority against, but at the academic board meeting there was not one dissenting voice. It does not make sense for the university to press ahead against such opposition. The LSE is unhappy about it, and there has been a great deal of rethinking in most colleges.

"I expect there to be a moratorium. I think there is a widely held view that if the Bill were unopposed, one could go ahead. No one in the university wants our internal debate repeated in Parliament. Other heads of school need time for debate, for new consultation, and time to think about the real needs of the university."

The Privy Council ruled on May 19 that the university could not change four key statutes which would have made the vice-chancellor the full-time salaried academic and administrative head of the university with a possible term of office of eight years and the principal responsible to the vice-chancellor. It said some of the changes went beyond the university's powers under the University of London Act 1926.

There is now a movement among the heads of some of the major colleges to call for a moratorium on the bill to allow time for debate, consultation and discussion.

The dispute is about the relationship between the university's central administration and its constituent schools, colleges and institutes. Opponents of the constitutional changes argue that these would endanger the autonomy of the schools and other institutions, while the university administration argues that their autonomy is not endangered.

Two further bones of contention concern the establishment of a central planning unit (JCCP) to advise the court and senate on quinquennial submissions and the co-ordination of academic policy, and alleged lack of consultation over the changes.

John Griffith, professor of public law at the LSE, says that the proposed constitutional changes, which stem from the Murray report of 1972, "have remained virtually intact" and that the report's recommendations have not been fundamentally altered by the two consultative committee reports which followed it.

The university argues that in the light of protests against the Murray report its later proposals were modified, that the remit of the JCCP is under review, and that the changes are an "urgent necessity" and were only disallowed by the Privy Council for technical reasons.

The university now plans to produce a third consultative report summing up consultations on the second report, and including a draft of its proposed Bill which will be sent to all teachers by October or November. The draft Bill will probably go to schools for consultation after the next senate meeting on July 16.

Mr Peter Griffiths, secretary of the consultative committee, said on Tuesday: "We have not received any resolutions calling for a moratorium on the Bill and the colleges have indicated support for the Bill so far. Until we receive any resolutions, the university is still working to the November 27 deadline." November 27 is the only date when a private Bill may be submitted to Parliament, otherwise it would have to wait another year.

Mr Griffiths continued: "The draft Bill will be put to senate on July 16 and then sent to the governing bodies of colleges. We are not expecting to make a final decision before consultation with the schools.

"There will be time for adequate consultations because the idea of a Bill was one of the basic assumptions of the second report. The Bill will only seek to get rid of the shackles of Section 4(1) of the Act. We will retain all the present safeguards, such as the right to appeal to the Privy Council."

'Universities must not be whipping-boys'

by Sue Reid

Universities must not be used as the whipping boy for the failed expectations of the 1960's, Lord Boyle, vice-chancellor of Leeds University, told the Association of Education Committees conference in Eastbourne last week.

When the universities were asked to expand at the beginning of the 1960's, the initial reaction was one of reluctance, said Lord Boyle. But when they were put on their mettle, and provided with incentives, they responded with some enthusiasm to the Government's call for expansion in numbers and this had been the trend ever since.

In spite of the very difficult time through which universities were now passing they had expressed their willingness to expand yet again to 20 per cent in the bridge in the 18 and 19 year old age group which would occur between now and the early 1980's.

"They now represent an enormous capital and human investment, one of the very best this country has got," Lord Boyle said. "Our country has a bad record in its attitude to capital and human investment and we must do our very best to make sure the mistakes which have been made in the other areas of national economic life are not repeated here."

It was wrong to believe that all university departments were working to staffing ratios of one to eight and a half or anything like it. Some of the most hard pressed departments at Leeds University, where competition for entry was heaviest, had ratios of one to 13 or 14.

"Getting a more even distribution of resources is bound to take time, especially in the larger and old civic universities, and now the post Robbins euphoria is over we must beware of using the universities as a whipping boy for the failed expectations of the 1960's."

Lord Boyle said if there was wasteful competition in higher education and if the science vacancies in the universities were roughly equal to the number of filled places in the polytechnics, the situation was not the fault of the universities. The notion that polytechnics were cheaper was being steadily eroded by accumulating evidence.

He said that universities were national and not regional institutions. Some form of long term planning between universities and polytechnics might be essential, but few in the university sector would agree that the University Grants Committee system should be abandoned and higher education regionally administered. Their national status, along with the block grant, was one of the essential freedoms universities should defend.

Lord Boyle said he believed universities should have the freedom to offer whatever courses they wished within the limits of their resources. He defended the right of students to apply for entry to any such course.

Freedom of admission for the student, provided a place could be found and the minimum qualification was offered, was bound up inseparably with the freedom of academics to teach and research as they thought fit. The block grant to each university and the minimal use of earmarked grants were essential conditions of academic freedom.

Universities had something special to offer and research often had direct relevance to the world outside. Prospective students considered this aspect, the combination of subjects which could be taken and the breadth of subject-matter offered in the first years of a three year degree scheme, when deciding what university they would apply to

£42,000 look at role change

One of the largest Department of Education and Science research grants to be awarded to a college of education has been given to Berkshire College to investigate how it is transformed into a college of higher education.

A sum of £43,000 has been given over a three-year period so that researchers can follow its development from a specialist teacher training college to one of Britain's first liberal arts colleges.

One of the more important parts of the investigation will be an analysis of how students choose particular courses and what factors underlie a decision to study at a liberal arts college in preference to a university or polytechnic.

Since many of the new courses, including the pioneering Diploma of Higher Education course, are modular in structure, the study will try to plot why students make particular choices and whether these choices are determined by previous education.

One possibility being examined is that students who are given a free choice might opt for a narrower range of options than would have been available in a prescribed course.

The study will also consider the effectiveness of the wide range of administrative and counselling services available.

Group to fight 'NUS extremes'

A moderate students' group has been formed to fight what it sees as unrepresentative and extreme policies recently adopted by the National Union of Students.

Students for Representative Policies, which takes over the mantle of the earlier Radical Action Group, will campaign next term to make the NUS more democratic.

Containing members of all three political parties, the group claims to have members in at least 20 colleges and universities and a total membership of about 500. It disclaims any affiliation with any existing student political organization.

Mr Paul Booth, national secretary of the group and a Liberal Party member from University College, Cardiff, said the people who pronounced NUS policy were an entrenched clique beholden to tiny minorities. The policies adopted on Northern Ireland and the denial of a platform to so called 'racist speakers had shown how unrepresentative they were.

The group last week announced a new policy document on education which argues for the retention of a private sector and the need for discipline in schools as well as "special treatment" for the disruptive minority.

Research exposes Scots myth

A persistent myth that Scottish universities have a high proportion of working class entrants will take a heavy blow when a research paper from Edinburgh University's Centre for Educational Sociology is published soon.

The paper shows that in the past 12 years the percentage of men students from working class backgrounds has fallen to roughly the same level as in England. The social "brouilln" of the universities has been one of their distinctive characteristics in the eyes of many politicians and defenders of the Scottish heritage.

Mr Andrew McPherson, director of the centre and university lecturer in sociology, says the paper recorded that the Scottish trend was in line with the rest of the United Kingdom.

The paper is based on a longitudinal study of school children in 1962 and a decade later with comparable qualifications at the sixth form "higher" grade examination. It shows, Mr McPherson said, a constant difference in examination performance in favour of the middle class children. There was even evidence that the gap was widening.

"Yet overall standards improved slightly over the decade for both working and middle-class pupils and so did the chance of university entry. So why was the gap there?"

It was interesting why this question had not been tackled in a rigorous way by Scottish educational researchers before, he said. It perhaps showed how deep seated some assumptions were even if they were erroneous.

The direction of the work at the Edinburgh centre has been warmly welcomed by some Scottish educationists.

Course compares East and West

Oriental studies may now be taken as part of the BA honours humanities degree at Huddersfield Polytechnic.

The course, which concentrates on China and Japan, is based on the geography and history of the countries, and aims to explore the main differences and similarities between Eastern and Western societies.

Questions that might be raised are whether Japanese feudalism can be equated with the Western system, or the inevitability of China's becoming a Communist state.

Topics include Chinese expansion in South East Asia, the origins of Japanese aggression and its role in the second world war, the cultural revolution in China and the Sino-Soviet split.

The course comprises a third of a degree.

'Give equal pay to academics abroad'

Academics in teaching or research posts abroad should have the same salary, promotion prospects and leave as the host country would give its own lecturers, the Council of Europe suggests in its final recommendations on the position of university teachers and research workers abroad.

It recommends that lecturers taking foreign posts should have the same level of qualification required of lecturers of the host country, but not necessarily that country's own degrees.

In all countries it should be possible for a foreign member of staff to have permanent status. Short-term contracts should be from six months to two years.

Either the home or host country should agree to be responsible for the lecturer's social security. Time abroad should be counted in the same way as time at home as regards pension rights, salary levels and seniority.

Careers advice now from outside the alma mater

A mutual-aid scheme to help graduates or students who fail to finish their courses get career advice from universities and polytechnics other than their own has been devised by the Standing Conference of University Appointments Services.

The scheme will refer graduates to career services at institutions near their own homes if they feel geography or expense are against them using the service where they received their degree.

The idea was set up last summer on an experimental basis and used with considerable success. Almost all the university and polytechnic careers services affiliated to SCUAS, now numbering more than 70, took part. Some offered a full range of services to graduates from other institutions, including interviews with careers advisors. Others gave information through their careers library and special vacancy bulletins.

Many of the careers services are prepared to help not only those with degrees but also those finishing their studies at an earlier stage. A graduate or student in search of a post has only to contact the careers advisory service or appointments boards of his own university or polytechnic to be put in touch with an institution which is well situated for him and deals with his particular career needs.

Boost for Bucks law licence

The Advisory Committee on Legal Education has said the Law Society and the Bar Council should accept the licence of the University College of Buckingham as equivalent to a first degree. The licence, gained in two years study, should earn the same exemption from the professional legal qualifications as other first degrees.

Medical dean honoured

Omitted from last week's list of those given awards in the Birthday Honours was Miss Frances Gardner, dean of the Royal Free Hospital School of Medicine, who became a Dame of the British Empire.

THES features editor

Mr David Dickson, until recently science correspondent of *The THES*, has been appointed features editor. He will have particular responsibility for developing a new page devoted to the consideration of academic issues. Dr Alan Cane, deputy editor, will be responsible for science coverage.

Demo against Queen foiled

Students prevented fellow students from disrupting the Queen's visit to Birmingham University last week to open a centenary exhibition.

As the Queen walked through the university grounds about 40 students, representing the cuts action group, staged a demonstration opposing the cost of the Royal visit at a time when education is faced with severe cutbacks. But their protests were quickly drowned by loud cheers and bursts of patriotic song from the 3,000-strong crowd as the Queen stopped to talk to students along the route.

Mr Roger Haworth, chairman of the Birmingham area of NUS, was shouted down by students who felt the demonstration to be unnecessary.

The Queen's visit to open the Mason College Exhibition was the high-spot in the university's centenary celebrations. In opening the exhibition she said: "I am proud that the university has made such an important contribution to 100 years of west midlands history."

Accompanied by the chancellor Sir Peter Scott, and the vice-chancellor, Dr R. B. Hunter, the Queen also toured the university's sports hall and visited an exhibition in the medical school, where she examined samples of American and Russian moon rock.

Before leaving to go to Stratford-upon-Avon to open The Royal Shakespeare Theatre Centenary Garden, the Queen was presented with a pair of glass goblets, made and engraved in Stourbridge especially for the university's centenary celebrations.

● Birmingham's other university—the University of Aston—also had something to celebrate last week when its new library building was officially opened by Sir Joseph Hunt, Aston's first pro-chancellor from 1966-70 and now a member of the university's council.

The library, which has been in use since last April, cost over £800,000 to build, and has a total floor area of over 5,000 square metres. The building has three floors, room for 300,000 books and will eventually provide seating for 980 readers.

Birmingham centenary, page 23

V-c for new Australian university appointed

Professor Frederick Jevons, professor of liberal studies in science at the University of Manchester, has been appointed the first vice-chancellor of Deakin University, the new university at Geelong, Victoria, Australia.

Professor Jevons will take up his appointment in January 1976. Deakin University will provide tertiary courses for residential and external programmes.

OU pay cuts foreseen

by David Hencke

A large number of the 6,000 part-time staff employed as tutors and counsellors by the Open University could face pay cuts of up to £100 next year, according to the OU branch of the Association of University Teachers.

In a statement to members it says that the pay cuts, caused by the restructuring of contracts, should be countered by industrial action unless the university agree to increases in contract fees and expenses.

"Since an ill paid, exploited and discontented part-time staff is not in the best interests of the OU and its students, we believe that such action would be justified in such circumstances and would win widespread support."

The union's case is based on a comparison of a 1976 tutor-counsellor on a type B contract having 18 foundation level and 18 post foundation level students with a member of staff doing similar work this year.

Assuming that, as a counsellor, he undertakes 20 sessions of two hours each and, as a tutor, 15 tutorials of one hour each, he will receive a pay cut of £113.90.

For post-foundation level tutors the per capita payment of £3.76 has been replaced by a flat rate of £50 in 1976 which will mean that if a lecturer has more than 12 students he will lose money.

The AUT is also complaining that a rise from 55p to 80p in per capita expenses does not cover the expenses and falls short of their claim of £1.

A spokesman for the OU contested the figures given by the AUT, pointing out that they did not include script fees which would amount to nearly £200. They agreed that the total in 1975 wage figures would mean a reduction for some people but added that the work load would be reduced by 20 per cent. In other cases there would be an increase.

The OU added that negotiations on new rates of pay had still to be agreed for 1976. A spokesman said that there had been 22,000 applications for the 5,300 part-time posts available in 1975.

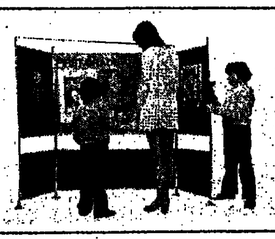
● The Open University will have to turn away more than 35,500 out of its 52,551 applications. The OU planning committee agreed that the admission target should be cut from 20,000 to 17,000 in January which will save £420,000.

Manchester arts theatre

In a caption to a photograph of students demonstrating against uncomfortable examination conditions in the Arts Theatre at Manchester University (*THES*, June 13), it was incorrectly stated that it was in the geography building. It is in fact in the arts building.

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Further £50,000 for small grants scheme

by David Dickson

The Nuffield Foundation has allocated a further £50,000 to its small grants scheme for undergraduate teaching in response to the large number of applications received.

The scheme, under which grants of up to £2,000 are being made available for teaching programmes in the pure and applied science, the arts and social studies, and in medical education, was announced in December 1974, and had initially been allocated a total of £20,000.

"We had 250 application forms printed, and thought that this would last us for a few years, but in fact we ran out of stock in the first month", Mr Tony Becher, an assistant director of the foundation, said.

"So far, we have had over 500 requests for forms, and out of 153 submitted to us 40 awards have been made, while 43 applications are still in hand."

It was in response to the high demand that the decision to allocate an extra £50,000 to the scheme had been made by the trustees.

"The idea for the scheme arose from seeing the number of people who were putting a lot of time and effort into improving their teaching, but doing it on their own, with no additional resources", he said.

"It seemed that the foundation could produce a scheme designed to help such people that would both enable them to work more effectively and give them recognition for the work that they were doing, something that already seems to be happening.

"Each application is looked at as much in terms of its own aims as in terms of what others are trying to do, and we have deliberately left the scheme open to people from any subject in any institution running degree courses," Mr Becher said.

"This decision seems to have been justified by the very wide range of activities, subject areas and institutions—with good ideas coming from both inside and outside the university sector—that have already been awarded grants.

"The scheme has clearly fired the imaginations and stimulated the energies of a sizeable body of teachers in higher education."

County seeks more control over spending

Essex County Council is to have a bigger say in the way its grant to Essex University is spent. Many members consider the local community should get a direct benefit from any money the university receives from the county.

At a recent meeting of a joint committee of the council and the university representatives of the local authority argued that the £63,000 grant should be spent on improving local further and and community education.

It could be spent on turning one of the campus buildings into a conference centre for local students and teachers to be used for short courses, it was said.

Until the reorganization of local government only part of the grant Essex University received from its local authorities was earmarked for specific uses. The £50,000 grant from the county council was only discussed by council members in a general way.

Mr E. G. H. Ainsworth, assistant county education officer, said that the county council now thought its grant should not benefit the university alone but help education in the county at large.

Costly advertising campaigns 'fail to attract students'

by Stephen Cohen

Expensively printed glossy brochures and costly advertising campaigns do nothing to attract more students to colleges, the assistant provost of City of London Polytechnic said recently.

Mr Michael Brandon-Bravo said it was a waste of time and money for colleges to produce prospectuses. They were more than likely to be just lists of academic staff and their qualifications and did not contain enough information about courses, career opportunities, lodgings and academic and social life.

National and regional newspaper advertising went largely unnoticed or ignored except in August and September. Career magazines aimed at sixth-formers were not read by them. Major careers exhibitions at a regional centre such as Olympia were a waste of money and effort and visits by college staff to schools were only of value if the speaker could deal with a wide spectrum either of institutions or courses.

"Speakers who extol the virtue of one subject in one institution are not welcome", he told the Scarborough conference of the Association of Colleges for Further and Higher Education.

Not enough thought was put into the production of prospectuses, Mr Brandon-Bravo said. Most of them were devoted to lists of names ranging from the governors to the gardening staff. If lists of names were needed it would be simpler to print them cheaply and give them to anyone who wanted them.

Mr Les Adams, chairman of Doncaster further and higher education subcommittee, told the conference how to get free publicity. "The Clay Cross councillors gave a wonderful example of how to use the media. No one knew of them at first and then they became a household word."

He questioned why the conference was dealing with public relations when there were more important things, such as adult education, to be concerned with.

Papers presented at the conference included one on the effect of democracy on colleges, two on business education, and one on the Houghton settlement.

Mr Adams said that while he welcomed the Houghton report, it had "created a divisory factor" between teachers and administrators.

"We've got principals, heads and deputy heads who are even getting more than our director of education", Mr Adams said. This was greeted with some cheers by the audience.

Mr Derek Weitzell, president of the Association of Teachers in Technical Institutions, said scale four posts were available in schools which corresponded to senior lectureships in further education. But some colleges were not able to have these posts because of the low level of their work.—*TES*

UK university elitism blocks EEC integration, says v-c

The highly selective nature of the British university admissions system is proving a stumbling block in aligning higher education with countries in the European Economic Community, according to Dr Frank Thistlethwaite, vice-chancellor of the University of East Anglia.

Speaking at Ipswich School speech day he said between eight and nine per cent of 18 year-olds in Britain went to university, the lowest proportion in any western country.

Britain had one of the most selective and elitist university systems in the world and during the whole expansion period of the last 20 years only about five per cent more school leavers went to university.

In Europe the passing of the *baccalaureate* or the *arbitur* entitled a pupil to enter university. For most subjects staff and student ratios were quite out of control and it was only now that in expensive subjects, such as engineering and medicine, the student quota in Europe was being related to teaching resources.

Dr Thistlethwaite praised the British university selection process as probably the most effective in the world in terms of graduate education. Because pupils were so well selected on an examination and interview basis, so well prepared in the traditional sixth form, and because of the favourable ratio of university teachers to undergraduates first degree courses in most cases took only three years compared with four and six years elsewhere.

The failure and drop out rate of about 10 per cent was the smallest proportion of any university system in the world, except possibly Israel, he said.

Despite the population explosion of the past 20 years universities have tried to meet the demand without diluting the values of scholarship. Dr Thistlethwaite said this was a considerable achievement and our society should be proud of the universities instead of carping about their performance.

However, he added that as a result of the heading expansion and increased state support for students too many had drifted to the universities without any sense of purpose.

A university should represent some sort of commitment by the minority who have the intellectual interests or would value the mind stretching of a university course. Universities were still looking for talent and were in very good heart intellectually and morally despite the buffeting they had received in the past few years, he said.

FE pay settlement 'a conspiracy'

The further education teachers' pay settlement was a conspiracy against the polytechnics, according to the Association of Polytechnic Teachers.

In a prepared statement the APT, which represents about 2,500 teachers in polytechnics, said the settlement agreed to the Burnham negotiating committee discriminated in favour of teachers in technical colleges and those doing work below degree level.

The settlement is said to have resurrected the differential between university and polytechnic teachers by giving the latter only half the percentage rise of those at the bottom of the further education scale.

"By October it is expected that the gap between university and polytechnic salaries will have widened, in favour of universities, to perhaps £1,000 on the senior scales. There will then be no pretence of the 'broad parity' promised by the Secretary of State."

The APT said that the Burnham negotiation machinery had been shown to be totally inappropriate for the public sector of higher education, including the polytechnics and colleges of education.

Degree status for Euro-link course

The Council for National Academic Awards has conferred degree status on a project of joint cooperation between Middlesex Polytechnic and the Ecole Supérieure de Commerce et D'Administration des Entreprises at Rheims in France.

The two institutions have been working together for three years with the aim of providing the new European administrator in government and commerce with an education equally balanced between two major European countries.

The new four-year degree, developed from an initial diploma course, allows equal numbers of French and British students to study together for four years, spending a two-year period in France and two years in Britain.

Lecturers will follow the same programme, and examination boards will be made up of equal numbers of French and British staff working together.

The course allows students to spend an equal amount of time in French and British industry during sandwich placements and both industrial sectors have pledged solid support and committed themselves to taking students from the course.

The programme, leading to BA European Business Administration, is an innovation in Europe.

News in brief

CVCP to meet north of border

The Committee of Vice-Chancellors and Principals is to hold its next meeting in Edinburgh. It will be the first time it has met in Scotland.

A spokesman for the CVCP said this week there was no special significance in meeting in Scotland. Some meetings had always occasionally been held outside London.

Swedish award

Dr Hugh Pollard, principal of St Martin's College of Education, Lancaster, has been presented with the Order of Vasa, an honorary award equivalent to the OBE, by the Swedish Government.

The award is given to people who have made a significant contribution to Swedish life and is rarely awarded to foreigners. Dr Pollard has built up links between his college and Sweden.

Woman professor

Manchester University has appointed its first woman professor of law. She is Dr Gillian White, 39, an expert in international law and formerly a reader at the university.

Compendium renamed

The Compendium of Advanced Courses in Technical Colleges has been renamed for the 1975-76 edition as *A Compendium of Advanced Courses in Colleges of Further and Higher Education* to meet the redesignation of institutions. Copies, price £1, are obtainable from the Regional Advisory Council for Technological Education, Tavistock House South, Tavistock Square, London WC1H 9LR. It covers all full-time and sandwich courses available in polytechnics and other colleges in the public sector of higher education.

Terotechnology at Aston

The University of Aston in Birmingham wishes to point out that, despite Manchester University's claim, to be the only British university offering a postgraduate diploma in terotechnology a similar course has been offered at Aston since October, 1974.

Ballot on merger

A ballot of 6,700 college of education lecturers who are members of the Association of Teachers of Colleges and Departments of Education has taken place on the merger between the union and the Association of Teachers in Technical Institutions. The closing date for the ballot was yesterday.

The new association will be called the National Association of Teachers in Further and Higher Education.

More news page 23

2,000 jobs placed in jeopardy

by David Hencke

The future of more than 2,000 college of education lecturers has taken an uncertain turn with news of rising teacher unemployment among college leavers, more college closures and new cuts.

A delegation from the National Union of Teachers to see Mr Fred Mulley, Secretary of State for Education, received little joy when they warned that nearly a sixth of college leavers could be unemployed this year.

The union told Mr Mulley that a survey of 9,400 students in colleges, polytechnics and university departments of education showed that only 46 per cent had got jobs at the beginning of the month.

The NUT survey shows that some education authorities are no longer taking up their full quotas of teaching staff.

Mr Sam Fisher, chairman of the NUT education committee, said Mr Mulley emphasized the economic crisis during the meeting and appeared to offer little hope of Government action to stem rising teacher unemployment.

The union has asked him to introduce earmarked grants to cover the introduction of the induction year and in-service training for the profession.

● A meeting of the Advisory Committee for the Supply and Training of Teachers last Wednesday week was asked to recommend the Government to implement the induction year and some in-service training for teachers in 1976.

The committee received a report from one of its sub-committees urging the introduction of the schemes which are supported by the teacher and teacher training unions on the committee.

But the unions are concerned that the Government could shelve these plans which will mean that many college lecturers will be facing redundancy.

● Another teacher training college, Colonia College of Education, West Wickham is facing closure by 1978 in spite of earlier assurances by the Department of Education and Science that it had a secure future until the early 1980s.

College staff were informed that a private meeting between the Catholic Education Council and the DES discussed a proposed nil intake for the college in 1976 and for the Maria Assumpta College, in Kensington.

According to Mr John Addison, a lecturer at the college, the DES had reluctantly agreed to an academic association of the college with the Croydon College of Design and Technology. Negotiations were continuing with the Croydon education authority and proposals for a Diploma of Higher Education course were under consideration when the college was informed of the DES "suggestion" for closure.

The plans now seem certain to go ahead and another 625 places will be lost to the teacher training system by 1978.

● The future of Worcester College of Education is to be considered alongside the fate of Hereford and Shenstone New College, Bromsgrove by the Hereford-Worcester authority.

A report by Mr M. J. Gifford, county education officer, shows that among the alternative being considered by the working party is the retention of centres at Hereford and Shenstone and the closure of Worcester college.

● Staff at Kingson upon Hull College of Education have signed a letter of protest to the DES because it has only been allocated 600 teacher training places for the whole region. The cutback in Humberside will mean the loss of 900 out of the present 1,500 places and reduce the size of the college by one-third.

Oxford's old-time religion stays

The congregation of Oxford University has confirmed its decision to reject changes in the syllabus of the theology degree put forward by the theology faculty.

In a postal ballot members of the congregation voted to uphold a decision taken on June 3, despite overwhelming support by the faculty board for the revision. The proposals would have made Greek an option and allowed candidates for the degree to spend less time on the Old Testament.

According to the Rev P. W. Bide chaplain and tutor in theology at Lady Margaret Hall, and one of the signatories of a last-minute plea to members of congregation to support the changes, the proposals were defeated by a "strange alliance" of High and Low churchmen and offended classicists.

Members of the theology faculty are anxious to play down the conflict. The Rev Dr D. E. Nineham, warden of Keble College, said the need for some kind of change in the syllabus was agreed by all the parties. Congregation had not approved the precise form the faculty put forward but to see this rejection in terms of a single principle would be to misinterpret it.

It is likely that a revised version of the syllabus will be discussed by the faculty next term and put forward to congregation again later in the year.

Don's diary

Academic opera?

Don Giovanni? Don Pasquale? Or even don fatale? The very term evokes the picture of a confused and elderly gentleman posting his umbrella into a letterbox and walking back to the Athenaeum clutching his letter and muttering "That'll give the archaeological society something to think about." It is a term beloved of writers in the *Sunday Mirror* but one that is bound to make the hair of any respectable "redbricker" curl. No professor of naval architecture or surgery would like to be referred to as a "don", whatever the term really means, apart from a possible indication of embodiment in the Spanish nobility.

University terminology is, of course, in any case bizarre, as was explained to me by a distinguished dean of Columbia University who said he was always referred to as "doctor" and not "professor" (though he was the holder of one of the most important chairs in the United States), because professors in the United States were usually small town pianists who played part-time at night in the local brothel. The term "vice-chancellor" is similarly open to numerous interpretations, and the only time it has ever given me any real pleasure was when the desk clerk at New Orleans' plushiest hotel said to me on arrival "Gee! Are you really a vice-chancellor? I ain't never seen one before". I have a vague idea that at the back of her mind she was confusing the title with that of a duke.

The backgrounds of successive generations of vice-chancellors reflect changing fashions: at one time the scene was dominated by historians and classicists; more recently there was a rash of medical vice-chancellors, and at present there is a positive irruption of lawyers, while there has always been a respectable representation of physical and applied scientists. It is difficult to escape the suspicion that the current fashion for physicians and lawyers was not entirely unrelated to the forlorn hope that they might prove more successful at containing student indiscipline than their predecessors. Even more esoteric disciplines, but there seems to be little evidence that this has proved to be the case. The only fact that seems fairly certain is that the large multi-faculty urban university weighted in the direction of professional studies has been less prone to student troubles than some of the "golf course" universities where the vice-chancellor is either on the up-train to London while his students organize jamborees in the union, or where he and his student officers alternate in the occupation of the administrative offices.

As anyone knows who has helped to look for a new vice-chancellor, the task is anything but easy and the appointment is not greatly sought after, at least it is greatly sought after by those most unsuited to hold it; as is so often the case in all forms of public appointment, the most successful runs being always dragged screaming to the throne. The unpopularity of the post is not difficult to explain: it combines considerable responsibility with a minimum of power, and indeed it is not surprising that the man who has organized a successful university department, has built up an international reputation or has had the pleasure of training a few generations of successful disciples, should find it irksome to exchange the role of a performing star for that of a scene shifter whose main function is to set the stage for the performances of his colleagues. It would be unduly flattering to compare his function with that of Sir Thomas Beecham conducting a second class touring opera company, but the analogy is sometimes difficult to resist, especially if some of the voices are more out of tune than their proud possessors imagine.

Top cat's chore

However, the fact remains that the present generation of vice-chancellors comprises some figures of distinction who have abandoned very successful academic or political careers to undertake such employment. They include fellows of the Royal Society and holders of chairs at major universities, as well as teachers and writers of wit and distinction. Why on earth do they take up such an unrewarding chore? The main reason, I suspect, is plain vanity and the desire to be "top cat". Probably even more frequent is the fact that the other possible appointees were even worse, and this has certainly applied in a few instances known to the writer. Without doubt the sort of man who sets out to be a vice-chancellor should be regarded with suspicion—and usually is.

Not that the appointment is without its rewards: the most important of those is that it opens the door to a range of personal and social contacts outside the strictly academic or professional fields, and to those who do not appreciate how little power and influence the vice-chancellor really wields it at any rate sounds important. Very occasionally it is possible for the vice-chancellor to influence a vital decision or to push through an important appointment, though this is admittedly rare. Indeed the writer has not infrequently nurtured an uneasy suspicion that, as chairman of an appointing committee, his support for a particular candidate has been the deciding factor against the applicant's success.

Of course the faculties vary and demand entirely different handling. For many years the faculty of medicine in most provincial universities has been virtually autonomous, and even today it exerts a controlling influence in its own appointments. However, its days of financial independence are over and, since it is one of the big spenders, it is in serious competition with similarly expensive subjects such as pure and applied science and computing. At the same time both the senate and the council of the university are influenced by the prevailing need to increase the home production of medical graduates and have not entirely escaped the rapidly fading mystique that the untutored mind still associates with the healing professions.

Pure science is almost as expensive per capita and is infested by prima donnas, the infantilism of whose behaviour sometimes seems to be directly proportional to their intellectual and academic distinction. It is also the scene of some splendid feuds and makes a disproportionate contribution to the vice-chancellor's involuntary psychotherapeutic practice. The arts faculties are cheap and therefore popular, in that considerable student numbers can be achieved with fairly small expenditure.

As vice-chancellor I have made numerous attempts to attend meetings of the arts faculty but I have always been dissuaded by successive deans: they may be right in their suspicion that I would find the proceedings tedious; they are greatly addicted to continual changes of curriculum and to holding impassioned debates as to the propriety of substituting a colon for a comma in line thirteen of paragraph four of the regulations for the diploma in witchcraft or religious knowledge.

Belonging to a university that does not subscribe to the myth of social science but has an active if more modestly labelled department of social studies, I have been spared some of the excesses of which I have read in the literature of sociological learning; and indeed our social studies staff have their feet very firmly on the ground and furnish very useful professionals to staff the monstrous regiment of social service.

The agricultural student can be identified by the strength of his grip on shaking hands at the ceremony for the conferment of degrees, which produces a curious crunching noise in the vice-chancellor's right hand followed by bruising which usually settles down in five or six days. The department of religious studies appears to attract an unorthodox and sometimes frankly atheistical staff, which may account for its very considerable popularity with a highly intelligent intake of students, quite a number of whom go on to perfectly respectable professions like chartered accountancy.



The only real don—Giovanni.

Wanted: a führer

Of economists, the less said the better. The subject lacks both scientific respectability and predictive value, is hopelessly divided between those who see it as a branch of political psychology and those who regard it as entirely numerological. It is a ding-dong battle in which the econometrists (recently in the ascendant) appear at the moment to be giving ground to those who measure the mistier parameters of politics. What is clear is that, lacking any objective measure of professionalism, both parties sustain the firm conviction that the other are not economists at all.

There are a few small groups of whom one sees very little. Archaeologists and geologists seem usually to be setting off somewhere armed with spades and Land-Rovers and to publish in esoteric journals. The faculty of applied science comprises a large group of anarchist engineers who pay voluble lip-service to joint activities but in fact appear to pursue their several disciplines in a highly fragmentary fashion. My own suspicion is that they would benefit from the services of a flihver with some of the powers and tenure of a permanent dean, but I am pretty certain they would not agree with me since they are highly individualistic and delight in explaining just how little there is in common between mechanical, electrical and civil engineering.

Needless to say, the university does not indulge in the simple processes of teaching French or German but conducts courses in French or German studies which, so far as I have been able to discover, produce the candidate from colloquial fluency but give him an unearthly insight into the cultures of the countries involved. As in most universities the best musicians are found not in the arts departments (which in general seem to have a profound suspicion of creative or executive artistic activity and much prefer writing about books to actually writing them) but amongst scientists, mathematicians and medical students.

Angel incumbent

These are but random thoughts drawn from experience in a single university, but discussion with many colleagues throughout the English-speaking world confirms that the pattern I have described is not grossly distorted or widely variable as between universities of a similar kind in different parts of the world.

When I gave up real work to become a vice-chancellor I did so under the erroneous impression that I would enjoy three months' vacation every summer. Alas, it was not to be, from the administrator's point of view it is hardly possible to tell whether one is operating in term time or during the vacation. The students are in any case infinitely less trouble than the staff, and most of one's time is occupied either sitting on interminable and all too often inconclusive committees or listening to consultants from lecturers about professors or from professors about lecturers, in nearly all cases entirely deserved. The best thing that can be said for the job is that it brings out certain angelic qualities in the incumbent's personality that had previously escaped even his own notice.

Anon

The author is vice-chancellor of a northern university.

Is LSE Light Horse enough of a defence?



Any speaker who wishes to extract a quick and certain cheer from an assembly of educationalists (teachers or students indifferently) need be in no doubt how to do it. The trick is simply to complain at the scandalous amounts of money being spent on defence, by contrast with what we spend on the education of our young.

One might have thought that the simple element of self-preference in such very common statements might have induced a little caution among spokesmen for education. The cry of "don't give it to them, give it to us" is hardly the highest peak of human moral perfection. And those who snipe at the bang-buck ratio in an investigation of the cash-culture ratio.

A thorough consideration of the issue of national defence in an educational context would raise one of the most elusive questions of educational thought: the relation between being a citizen and being an academic. These two characters are in some respects antipathetic, for citizenship may well involve us in loyalties that could not be sustained academically. Many academics are in fact virtually indifferent to political questions, and it is clearly one of the virtues of the community in which we live that such indifference is both possible and defensible.

Most academics are not, however, indifferent to the politics of the community in which they live. And it might well be argued that they are wise to be involved, for universities are by no means at home in all kinds of state. It is paradoxical that the only sort of state in which they have flourished in modern times has been the sort of liberal democratic state in which indifference is a possible political option; and yet that very indifference may in some circumstances weaken such states.

But the kind of educational hostility to defence that so frequently appears in public statements in Britain does not spring from any such general considerations. It derives, rather, from an odd combination of things: from ordinary human blindness, from opportunistic knavery, and from seepage of pacifist traditions having a long history in Britain. And it is perhaps worth noting that it is often the very people most hell-bent on concentrating all public initiative in the state who are most flagrantly in support-

ing the state in the function of defence which it alone can perform.

The spiritual ancestors of those who complain about the defence budget are those who in the 1930s made a spirited attempt to keep Britain disarmed. They had an effect, but they did not quite succeed. As it happens, we now know with considerable certainty—and we could not have known at the time—some of the consequences that would have resulted if they had.

These consequences include at the least the extinction of every man, woman and child of the half-million strong Jewish community in Britain. The point is worth making in diametric terms to indicate that the stakes involved in the question are of a quite different order from those of the level of the student grant.

The post-war Campaign for Nuclear Disarmament fought a rather similar battle in the eccentric belief that if Britain were to abandon nuclear weapons, it would be giving a moral lead to the world and thus saving civilization. The British mood of self-sacrifice on this question has not, of course, provoked any echoes abroad, and the only other country similarly given to fitful moods of basing its foreign policy on such moral posturing, namely India, is amongst the countries now seeking nuclear weapons of its own.

Nor, indeed, is there any good reason why such a policy should have succeeded. The policy of a sovereign state is always reversible, and the obvious response to a mood of self-abnegation on the part of an independent country is obviously for others to snatch advantages while the snatching is good. The only conditions in which this would not operate would be if the country were to espouse a total and permanent dependence capable of being enforced by the other state.

There is, in other words, little room for manoeuvre between the full responsibilities of independence in a hideously dangerous world, and complete surrender to the power of another. One may well choose to be red rather than dead—but the choice has costs, and is no guarantee even against death.

It is true, no doubt, that under some circumstances, it might make sense to sacrifice some elements of defensive preparedness in the hope of encouraging a response from likely opponents and thus moving towards a negotiated disarmament. But the only serious likely opponent shows not the slightest sign of responding; it has, on the contrary, taken all opportunities of building up a powerful navy well beyond the British level.

To cavil at British defence does, of course, make perfect sense from a Communist position. Given a desire that Britain should enjoy the benefits of Soviet satellite status along with Hungary, Czechoslovakia and the rest, defence forces are an obvious impediment. The Soviet similar given to fitful moods of basing its foreign policy on such moral posturing, namely India, is amongst the countries now seeking nuclear weapons of its own.

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Because they cannot imagine that anyone will embark on the horrors of another major war, they imagine both that it will not happen, and that if it does happen, a telephone call announcing surrender will avert all serious problems. It is indeed a possible view that to be conquered may at times be an option preferable to expending one's strength in an exhausting resistance. But being conquered can be something other than a desperate expedient only to those who have little conception of what it really means.

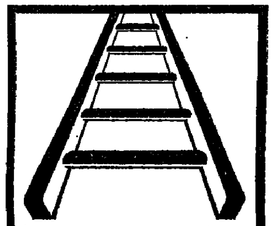
Perhaps the best way of describing the kind of folly involved here is that it consists in not being able to take seriously a benefit which consists only of an averted evil; yet such benefits are sometimes the most important there are. Thus Dr Sheila Bromley a couple of years ago gave the AUT winter council meeting the benefit of her reflections on defence in the form of the assertion that "weapons either create scrap in use or become scrap obsolescence — thereby being uniquely wasteful of resources."

Weapons are scrap, of course, in the same sense that the fire extinguishers in most buildings will eventually rust away unused and find their way to the scrapheap. But it is merely a symptom of low virility to fall into the illusion that a remote danger is no danger at all. If would be an infinitely nicer world if we could ignore these nasty topics and spend all our time and energies in the seminar room. But, as Philip Larkin put it with a poet's economy a few years back:

"When the Russian tanks roll
westward what defence for you and me?

Colonel Sloman's Essex Rifles?
The Light Horse of the LSE?"

Revision time—when the planning has to stop



A-level and after

The ninth part in *The THES* serial about the choices facing school-leavers after A level returns to a boys' public school in the midlands.

With four weeks to go till A levels, most sixth formers at the midlands public school were preoccupied with revision. On this third visit making plans for after school took second place.

John, who had at first plumped for the London School of Economics, then for the University of East Anglia, has changed his mind again. He can afford to, as he is not thinking of entering until October, 1976.

"East Anglia does not have the particular course I wanted (politics and government), so I'm having a radical rethink. At least, they do have a course with politics in it, but I don't know if I want to go to East Anglia now."

His reasons for this change were unclear, least of all to him. "There are no particularly rational reasons. I've heard things in conversation; when you mention East Anglia people raise their eyebrows." He is thinking now of either Bristol or Sussex.

If his grades are good enough, he will possibly spend the year off in Norway. "If I don't do well enough, I'll be going to Norwood Technical College. My parents suggested it because I said at all costs I'm not staying here, and we live in South London I hope to God I shan't be going."

How did he feel about his coming examinations in politics, history and history of art? "I'm not particularly confident. I've given up actually; I won't do very well. But", he added philosophically, "I'm not particularly worried. I can't work up any emotion over it."

Tony, who is going through the Universities Central Council on Admissions system this year, has now made his final selection. Manchester is first and Exeter is second; both want another two C grades in addition to the one he already has in economics.

"I liked the course, particularly at Manchester, although we didn't have time to look round very much," he explained. "We had a special introductory course—it was very good—giving the background of what we might be doing in the first year. At Exeter they gave a talk and answered questions, but the Manchester idea was much more helpful."

As for his other choices, Nottingham offered three Cs: "The interview didn't go very well and I wasn't that interested in the course". Bristol rejected him—"they've got quite high standards"—and he was offered a place at Bath conditional on two Cs and a B. He did not visit it because he wasn't very interested.

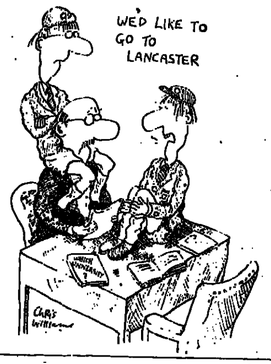
If he gets the grades, he will firmly accept an offer and take up his place in October, 1976. The universities have agreed he can defer the place for one year. "Then there is the remote possibility of Oxbridge; but I doubt it. Only if I did really well."

What he will do in his year off is still uncertain, but six months in France is one possibility. He had found the A-level course to be a lot of work and was critical of the assessment system. "I think perhaps the examination system of putting everything at stake in six to nine hours isn't very good. Perhaps one could combine it with some kind of work outside the exams; a written project, for instance."

Kevin's plan to join the army remains fairly secure although he has not yet been interviewed by the Regular Commisions Board. The outward bound course he took recently will stand him in good stead for this, he said. He has now decided on trying for the infantry rather than the artillery. How did he rate his chances? "Obviously it depends on the A levels, but mainly it's the RCB; if I get past that it will be OK."

Kevin's main change since the last visit is that he has dropped economics A level. "I didn't feel too happy about economics, and I thought it would be better if I concentrated on biology and geography and tried to get good grades in two, rather than fail or just pass in three."

Was he nervous at the prospect of the examinations? "Not at the moment; I doubt if I shall be. If the wrong question comes up, it comes up; there's no point flapping over it."



He felt the A-level course to have been worthwhile, but was "slightly against the specialization. Our biology master, for instance, is teaching us for A level what he did for his degree eight years ago. There's a lot to get in; if we did not specialize quite so much it could be better, but I don't know how one could do it."

If he leaves the army he will take a year off before starting at Durham Agricultural College, but is undecided how it will be spent. "I've just left the whole thing open at the moment. I might decide to stay in the Army."

Shelley, who had a place at Charing Cross Hospital at the last visit, and been rejected at Westminster Hospital, has still not heard from any of the other three hospitals of his choice. "Presumably the hospitals have sent formal rejections to UCCA who have not yet passed them on."

His place is conditional on three Cs. "The point is, I'm not sure if I will be accepted if I get a D or two As." His subjects are physics, chemistry and biology.

He was a little nervous at the prospect of the examinations and was, like some of the others, critical of the system. "It's often difficult to pack two years' work in a space of six hours; it's not really a very fair test. But on the other hand, there are disadvantages with alternative forms of assessment, and continuous assessment is no doubt difficult to organize."

Mark, taking Oxbridge entrance in November, has still not come down on one side of the law/classics fence. But interest in his A-level subjects (Latin, Greek and mathematics) has taken him recently more towards classics. "I've always enjoyed them but it's becoming more obvious. It is not certain though by any means", he added.

His other dilemma—whether to choose Oxford or Cambridge—is also unresolved. "I've looked at the prospectuses. They're very different, but I have not decided which I prefer."

He had managed to visit Oxford when the school took a party to a classics conference. "It was pretty much what I expected. It's meant to be the nastier of the two buildingwise. But I don't really know. I'd like to see Cambridge."

The practical side of the A-level examinations bothered him most. "I just hope I am quick enough in writing them. But I think examinations are a good idea. Continuous assessment puts more pressure on you."

Frances Gibb

The Association of University Teachers presents a discussion paper on the lecturer's rights

Why academic freedom is the right to be responsible

In our document Universities in the 1970s we have drawn attention to the purposes of universities in research and scholarship, as well as in educating students. The document makes clear the AUT view that universities and university teachers have responsibilities to society as a whole in fulfilling these purposes.

Our view of academic freedom is that it consists of those conditions and rights which make it possible for those responsibilities to be carried out. A similar sentiment was expressed in a resolution of the 15th Congress of the International Association of University Professors and Lecturers which recognized academic freedom as a system of safeguards by which society can preserve and extend man's knowledge.

In saying this we in no way wish to imply that the academic rights may not be equally important to other sections of the community or to the community as a whole, nor do we wish to imply that "academic" is synonymous with university or even "higher education". Indeed we are conscious of the fact that, even if it were possible for the "freedoms" we discuss to be confined to certain institutions, it would be a sterile thing and in no way enable the responsibilities we mention to be fulfilled.

On the other hand we do wish to stress that it follows that academic freedom is "essential to the survival of society as to higher education".

Since we maintain that the need for academic freedom is relative to universities stems from the responsibility of fulfilling their purposes, we deem it necessary to start with some discussion of these purposes.

The Robbins report expressed the view that the aims and objectives of higher education are instruction in skills, promoting the general powers of the mind, the advancement of learning and the transmission of a common culture and common standards of citizenship. We agree with the Grimond report that the last of these "implies a doubtful philosophy" and that emphasis should be put rather on developing powers of critical analysis and constructive synthesis, assisting the growth of personal maturity and contributing to the well being of the community through the application of knowledge and encouragement of creativity.

These purposes of higher education cannot be fulfilled unless all those concerned in it are free, independent and critical in their work and pursue it with integrity, scholarship and a sense of responsibility.

We take up in Universities in the 1970s the question of the special role of universities and their relation to other institutions of higher education. We express our agreement with the Robbins view that, although the balance of aims may vary from one institution to another, all aims should be represented in each. It follows from this that, although the distinctive importance of different aspects of academic freedom may vary from one institution to another, none is the need solely of universities.

In the next section we take up some of the aspects of academic freedom which stem naturally from the above considerations and which are of particular concern to university teachers.

If universities and university teachers are to carry out the responsibilities we have mentioned it is clear that there must be no constraints of orthodoxy. There is, of course, the corresponding obligation of intellectual honesty and integrity and of hard work and dedication to the ideals we have stated. However, we wish to express our firm belief that, as in other spheres of life, the dangers of insistence on conformity far outweigh any dangers of propagation of "false" ideas. The issue (whether orthodox or not, whether held with integrity or not) can only be exposed in an atmosphere of free discussion and inquiry.

The AUT policy on one aspect of this was expressed in a resolution passed by council in December, 1972:

"The council reaffirms its view that academic considerations should determine the making of academic appointments, and further reaffirms its total opposition to any attempt to apply non academic tests in the making of university appointments designed to exclude particular persons or categories of persons and to the preparation or propagation of blacklists of unacceptable candidates."

Although the above resolution refers only to appointments, it has long been the AUT view that similar principles should apply to promotions. Our policy documents on appointments procedure and criteria for promotion attempt to lay down conditions which will foster the application of this principle.

Another point which meets with wide agreement is the right to publish—subject only to academic criteria imposed by editors of journals. (To discuss this condition further would take us beyond the scope of the present document.)

The Grimond report says "A university cannot pursue a line of conduct or policy, either by definitive action or apathy, which conflicts with its primary duty as an institution of higher learning. For example, the restriction or prevention of publication of the results of research is inimical to the advancement of learning."

We believe that, as a general principle, a university should not accept contracts with restrictions on publication. However, the following qualification may suggest some modification of this principle in practice:

(a) A deferment of publication to enable patent rights to be established—this may be in terms of benefit to a firm making the contract or to enable royalties to be earned for the benefit of the university. In either case, the period of restriction on publication should be defined and as limited as possible. The refusal of contract work with restrictions of this kind may limit severely the fields of research open to some subjects and so inflict a restriction on the freedom to research due to lack of resources. This in turn could reflect upon the effectiveness and standing of the department, particularly if practice varied between institutions.

(b) Acceptance of defence contracts which can result in complete or indefinite deferment of publication. A case can be made that such contracts are clearly a denial of academic freedom and that such research should be conducted in Government research institutes. If such contracts are accepted it should be clearly stated that members of departments concerned have a right to refuse to take part in such work and also that such refusal does not deny them access to resources for undertaking research work of their own choice.

The right to teach as one thinks fit is often claimed by and for university teachers. In our experience, even when we disagree with the ideas on teaching they express, most (if not all) of those who make the claim accept the responsibilities we have mentioned. They agree, for example, that where several opposing points of view are legitimately held in relation to a given topic, these should be put to the students.

We also consider it important to point out that in many fields it is essential that one course prepares the way for another, or even that a method of teaching in one course has impact on other courses. Therefore, while we would hold that an individual has a right to teach as he thinks fit, we should examine that right consistently with the obligation he has towards the students and his colleagues.

Similar remarks apply to the right to do the research of one's choice. In some cases there may be no need for any constraint, and where there is a need for constraint it must, of course, be democratically operated. The main constraints are in areas where extensive resources are required. In such cases complete freedom could be dissipative and clearly non consistent with the responsibilities in this area. On the other hand we must emphasize that the control of resources should be democratically exercised so that proposals can be examined in the light of the responsibilities we have outlined.

It is clear that questions of university government, especially departmental government, are intimately involved with the questions discussed here. It is therefore important to press for the implementation of AUT's policy on university government. This would bring with it an extension of academic freedom.

It must be remembered that, although some university teachers currently have more influence in university affairs than others, and some exercise managerial roles in relation to others, nevertheless all university teachers are members of the university as well as employees. This is reflected in the AUT which has all grades of membership. For these reasons we have considered it useful to include as Appendix A to this document a statement of standards of behaviour in respect of academic freedom to which we believe both universities and university teachers should conform and which AUT will use as a yardstick in cases brought to its notice.

It is not always understood that university teachers are under the authority of a most powerful "invisible hand" and do not therefore need the formal bureaucratic structures whether for university government or for control by the public of the university sector, that they may be tempted to impose on us. The invisible hand is that of open competition in the advancement of learning. Whether contractually required to do so or compelled by a quest for knowledge for its own sake, university teachers are required to publish their research findings and thereby leave them open to the most rigorous inspection of their academic peers throughout the world. Publication and criticism of publications is a guarantor of academic standards which needs no bureaucratic reinforcement or underpinning. To the extent to which individual scholars or small groups of scholars working in research teams are the source of both rivalry and progress, it is clear that the duty of university charters and of governments is to accord and assure individual scholars and small research teams the maximum autonomy.

An edited extract from a paper discussed at the AUT's last council meeting.



Professor Gareth Williams

From promising young man to accomplished Eurocrat

Gareth Williams was reluctant to be interviewed. "I still like to think of myself as a promising young man," he explained. "But maybe I ought to get out of that idea. . . ." Yet, at a youthful-looking 39, he is already an accomplished eurocrat (a consultant to OECD and UNESCO), a former associate director of a research unit at the London School of Economics, holder of a personal chair in educational planning at Lancaster, a former special adviser to a House of Commons subcommittee, and vice-chairman of the Society for Research into Higher Education.

He sees himself as a technician rather than a missionary for the cause of higher education—and as a pragmatist: "I'm the reverse of a conservative. If we could have the kind of society which contains, so far as education is concerned, what I understand to be the best in the Soviet system without having to go through the traumas involved, then I would be in favour."

He comes from a family of Welsh school teachers (father, mother, younger brother, younger sister) who lived in Suffolk. He won a scholarship to Framlingham College, a local minor public school, and never really felt he belonged: "In one sense I got on very well—I always have been able to get on well wherever I go—but I never felt part of it in many ways. And ever since there has always been a certain part of me that I will only share with a few trusted friends—while to the rest of the world I present this face that's appropriate."

Two years' national service was spent in the Royal Signals and mainly in Cyprus. Then he went to St John's, Cambridge, to read economics (because he thought it would be relevant), spent a lot of his first two years rowing (because he thought it was the thing to do) and ended up with a 2:1. Nevertheless, on the strength of a paper on the economics of education which he delivered to the political economy club, he was taken on by Colin Clark as a research assistant in the Agricultural Economics Research Institute at Oxford.

He kept an interest in the economics of education, and this took him (via a consultancy job with John Vaizey for the Organisation for Economic Development in Paris, and the fact that he had studied modern Greek in Cyprus) to a job with the OECD as member of a large-scale research team looking into education in the Mediterranean countries. He stayed on after that at the OECD, mainly because they offered him twice as much money as anybody else, and he ended up six years later as a principal administrator.

But he says he had always planned on returning to an academic job of some sort, and so in 1968 went to the London School of Economics as assistant director (with Sir Claus Moser) of the higher education research unit. "We were very much concerned with the relations between the education system and the economic system" he says, "and with the costs of higher education." In 1974, public concern—and public finance—for higher education began to waver, the unit began to change direction, and Gareth Williams took up an offer to become professor of educational research at Lancaster and director of the Centre for Higher Education Research. "As the 1970s progressed they were becoming more interested in developing the purely economic side".

He says he "was becoming interested in the work only in so far as it related to policy."

At Lancaster he has a secretary and full-time research assistant, teaching commitments at undergraduate and postgraduate level of about eight hours a week, and a Department of Education sponsored project looking into the attitudes of 4,000 young people between 16 and 18 towards their careers and education. And if he can raise the finance he is planning a three-part programme of research involving himself and colleagues at Lancaster.

The first part would look at future developments in higher education from the point of view of what young people actually want: "Most of the work since Robbins was concerned with statistical trends. Very little was done actually trying to find out what motivates young people. . . . Our focus would be to try to find out what makes young people take crucial educational decisions." The second part would look at the experiences of young people when they get into higher education, and the third would look at how it affects behaviour, and subsequent economic performance.

"I must confess I don't have any high falutin' ideas on education", he says. "I take the view in general that most people view education as largely instrumental towards achieving something else. . . . It's wrong for us in education to believe that everybody has the same interest in education with a capital E—a sort of unfolding of the human spirit for its own sake. As for higher education, I still try to resist being stereotyped as a higher education person—particularly as opposed to a further education person."

He says he feels depressed by the state of higher education, by what he sees as a diminishing willingness to appeal to reason and to evaluate evidence. He says he is worried by the move away from examinations and competitiveness. "Expansion was too easy. We did not have to consider what really were our aims, purposes, functions and methods. Now we are being asked to consider why the taxpayer should pay so many millions a year. That's hopeful. But what depresses me is the reaction of some of my colleagues who want to fight in a trade union way, while taking it for granted that the public should be prepared to pay for them."

For the 1980s, he forecasts the end of the binary system, a swing of the pendulum back towards tertiary education, strains between junior and senior staff (as represented in a bitter struggle between the Association of University Teachers and the Association of Scientific, Technical and Managerial staffs), the financial viability of the independent university, student loans, and the increased use of open university material. "If I were minister tomorrow, the first thing I'd do would be to end the binary policy. And if I had unlimited powers I would consider some golden or silver handshake to lecturers at the age of 50 in the same way that some people in the civil service have the opportunity to retire early while they still have time for another career."

"I do believe", he says, "in spite of my cynicism, that education in the real sense is probably the one hope for mankind. I'm sure it is. It's a bit premature to say what should be on my monument, but I suppose the only thing I can expect to be remembered for at the moment is having some tiny involvement in the great expansion of higher education in the sixties."

Tim Albert

A county coming to the boil

The DES has ordered the closure of one of the three colleges of education in Hereford and Worcester. One college principal has warned of a possible "vicious reaction" to the order which could land the county with a £2m white elephant in the form of recently completed college buildings. Which college will survive? David Hencke reports.

One of the most powerful illustrations of academic, social and economic problems created by the Government's reorganization of colleges of education is unfolding in the rural county of Hereford and Worcester.

The county council has been given until July 10 by the Department of Education and Science to produce a solution which would allow a reduction of 1,300 teacher training places (from 2,400 to 1,100) and a choice of closing one of their three colleges of education. The result whether Shenstone New College, Bromsgrove, or Hereford College, the two most likely candidates, or Worcester College, be closed will have a traumatic effect on the community and could lead to bitter recriminations in the area.

Lecturers such as Mr Don Thomas, of Hereford College of Education, talk of smouldering resentment if the Government continues to run down the county of Hereford, already hit by migration of young people, by closing Hereford College of Education.

Miss M. E. Hipwell, principal of the college, a justice of the peace, talks grimly of a "vicious" reaction from the townspeople if the college is left empty.

In prosperous Bromsgrove, Dr Dennis Brailsford, the principal of Shenstone New College, surveys his £2m of newly completed buildings and finds it inconceivable that any sane person could talk of closing a college that has taken well over a decade to build on a new campus.

So strong are the views of county councillors in the locality of the colleges that the county education committee agreed to bar them from sitting on the working party which is to sift the facts of each case.

Basically, the issue seems to centre on the dramatic social and economic effects that would be caused by the closure of Hereford and the loss of new academic opportunities if an "open college" proposal linking Shenstone and Bromsgrove College of Further Education were adopted.

Wherever the decision, however, the most extraordinary result seems to be that new buildings provided at Hereford and Shenstone at enormous expense might be left to fall empty.

According to the county treasurer the ratepayers of Hereford and Worcester are currently paying £359,000 a year in loan charges to pay off the debts of providing new buildings at the three colleges. The costs are divided, £60,000 to Hereford, £172,000 to Shenstone and £127,000 to Worcester.

At neither Hereford nor Shenstone does there appear to be a simple alternative use for these buildings.

The county treasurer has pointed out that only a "care and maintenance" arrangement leaving them empty would not bring excessive cost to an area with already high rates, since once teacher training ceases, the county can no longer draw from the local authority pool for funds.

Shenstone's case for survival clearly rests on its academic proposals to create a £4m open campus with the adjoining Bromsgrove College of Further Education. The further education college is virtually the only technical college in the county which is running a viable number of high level courses.

Geographically however, its elimination as a teacher training centre could take place if the Birmingham colleges could provide in-service work for North Worcestershire.

The case for Hereford in academic terms relies mainly on its cultural significance in an area barren of higher education provision and its contribution to rural education in an area in decline.

The academic goals of the two institutions are eras apart. Mr Joe Hillaby, a lecturer at Hereford, explained the difference as that between "a monotechnic and evolutionary" approach in Hereford contrasting with a "comprehensive and theoretical" approach at Shenstone.

Hereford College of Education is only interested in a modest diversification of courses (150 places) and linking a neighbourhood campus with the college of art and technical college. It shuns the total integration at Shenstone.

The social case for the retention of Hereford is very strong.

The loss of 660 students in Hereford will mean a decline of 10 per cent in the 15 to 24 age band in the city; the loss of employment will require seven to 10 new firms, employing the average number of 20 people, to move into the area; and it is expected to have a serious cultural effect on a town which has already lost its county hall, rates office and inland revenue department.

The college's support from the county is notable. Not only have the Lord Lieutenant and Bishop of Hereford written to *The Times* but nearly every car carries the sticker "Keep *Something* in Hereford, Save Hereford College of Education".

The difficult question facing the county is notable. Not only have insists that one college should go, which one should it be? If social considerations are considered above a programme for comprehensive academic development, Hereford will clearly remain.

But if national considerations for new institutions of higher and further education are to be the way ahead, Shenstone has clearly the strongest case.

The Prime Minister outlines the universities' role in industry's future.

Education for economic recovery

The Government's major legislative proposals—the Industry Bill, the Employment Protection Bill and the legislation on industrial democracy we shall be bringing forward—will have far-reaching consequences for the way in which industry is organized and managed. We believe that the best arrangements for sharing information between management and government, and between management and unions, are voluntary arrangements. To fulfil their responsibilities in all these areas effectively, employer representatives as well as managers will need proper training and preparation. The universities, colleges and other institutions will bear an important responsibility for this preparation and I ask you all to start thinking about how it may best be achieved.

The trade union movement very properly accepts primary responsibility for ensuring that shop stewards and other officials receive the necessary education and training. They have a major contribution to make in providing this training, but the trade unions alone cannot be expected to provide all the education facilities required. This is where the education service can do much to help, in cooperation between the TUC and unions, Government and other providers of courses. It should be possible, for example, to draw on the considerable experience which university and college teachers have in industrial relations teaching which is an increasingly important facet of business education and where which could help to lessen the extent of industrial conflict in the future. In particular, adult education—which has all too often been the off-campus Cinderella of the education system—has an important role.

It may well prove that existing courses will not necessarily be wholly appropriate for a mixed economy in which employees have an enhanced role in management. A great deal of thought will have to be given to how trade unionists, managers and civil servants can best be prepared for new responsibilities. They will have some differing needs which will require separate treatment, but there will also be a great deal which will be of common interest. The Government is very much concerned—as any government in this country would have to be very much concerned—to ensure that the right kinds of help are made available to employees for their new roles and we shall be looking to a continuing dialogue between the trade union movement and employers, public and private, government and the education service.

Responsibility for business and management education is of course widely shared in the education service, involving the business schools, university management departments, polytechnics and many other colleges. But responsibility for training future top management falls particularly to the universities and to the regional management centres in further education. Because of this important part which the universities have to play, I would like to stress one special point. The Government takes pride in the achievements and high international standing of our universities both as centres of learning and as institutions providing many forms of vocational education. I know very well that the universities are having to face difficulties because of the economic situation. These difficulties affect the whole education service, not just the universities, in different ways. I said in Newcastle earlier this year—and it applies just as much to universities as to schools and colleges—that this Government will spend as much as we can afford on educational provision, because we cannot afford not to.

The balance between education and training in the arts and in the sciences and technology is, of course, something which always has to be watched with great care. This means taking an interest in the factors which determine student preferences; the resources available for the various broad areas of education and training; and the needs of industry and commerce for different forms of vocational education and training. It is important in all this that we do what we can to get the balance right, and as there are no rules this can often be very difficult indeed.

The development of the business schools and management departments in universities and polytechnics shows how a particular need can be met and illustrates very well the vocational side of much university work which I have already mentioned. We now possess a well developed and skilled system of business education in this country. We have to ask ourselves whether we can find ways of making broader and more attractive paths from education to industry and vice-versa so that our economy gets the people it needs at all levels with the right qualifications.

The dialogue between industry and education must therefore be strengthened and the Government will play its part in encouraging those aspects of the education service which are most relevant and helpful to the economy. I hope that firms will do everything possible to encourage the use of sandwich courses by their employees and by college-based students for whom these often provide the first real taste of the workaday world. These sandwich courses at degree level are recognized in polytechnics and other colleges by the Council for National Academic Awards. Next year the council is expected to extend its involvement with business studies by taking on responsibility for the Diploma in Management Studies, a programme for middle management covering some 7,000 students.

At the sub-degree level, the Government look to the Business Education Council which was formed last year. The council's task is to increase the popularity with employers of existing awards such as the Higher National Diploma and, at the same time, it is to develop a unified national system of awards which will amongst other things encourage a much higher rate of release from employment for part-time studies.

Finally, there are the Government's industrial training policies. The Manpower Services Commission has responsibility for developing public employment and training services, the latter through the Training Services Agency. The Training Opportunities Scheme is making and will continue to make an important contribution not only at higher levels of business and management education but through commercial and clerical training.

Extracts from Mr Wilson's speech to the 10th anniversary dinner of the London Business School last week.

David Hencke visits Bristol Polytechnic as it develops onto a new site

Economic security points to survival

If economy is the key to survival Bristol Polytechnic will have a secure future.

Since its conception at a time of plenty first the Bristol and now the Avon education authorities have kept a tight reign on its expenditure which has not always pleased academic staff or students.

Now facing a lean period the polytechnic is well placed to survive having little of the costly fat of empty departments or underutilized workshops which is prevalent at a number of other places.

The polytechnic is also reaching an interesting stage in its development. It is just about to begin occupying a "greenfields" site at Coldharbour Lane or "Colditz" as some students call it.

This site on the edge of Bristol, and once part of the doomed Severnside town project, should be come a focal centre of the split-site polytechnic—if enough money is available to provide the final phases of development, equipment and the administrative services.

The question mark hanging over the institution is whether enough resources will be available. So far only two units, the student village which houses 250 students, and the management residential centre, are in use. In September the first major building which will include accounting and finance, business studies, economics and social science, law and languages will be handed over. The new building will also include a modern library.

Next year it is hoped that the mathematics and science building should be completed and plans have been approved for the first part of a third phase of buildings, including the students' union.

After this point the building programme of the polytechnic seems to disappear into the mists of time. The rest of the third phase should appear in the Department of Education and Science's approval list next year which will allow an engineering building and sports facilities. After this it should be some time before phases four and five—which cover new residencies, town and country planning, a library extension, construction, humanities and surveying—are built.

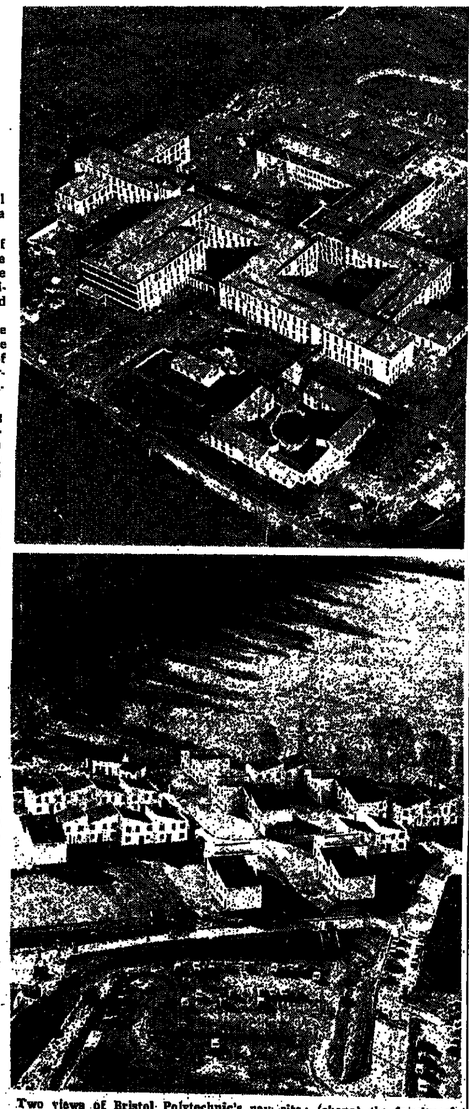
The local authority, while committed to these developments, now admits that phases six and seven—more study bedrooms and an art and design building—are unlikely to be built. In the case of art and design, the department, formerly the West of England School of Art, is well catered for in a new building in another part of the city.

Meanwhile, the polytechnic has to continue to cope with the problems of a multi-site institution, and accept that economies in staffing, equipment and even repairs and minor works programmes will become a daily concern.

Academically, however, the polytechnic appears to be making the best of difficult circumstances. When the polytechnic was designated, it took a large percentage of its high level work to Bath University. It had to build up many degree courses from scratch and also develop its departments to offer a wide range of courses.

The success of the polytechnic's development programme has been helped by the flexibility of departmental attitudes, the relative strengths of departments and a tradition that "servicing" on joint degrees is not a secondary activity to be endured because a department is unable to offer its own degree courses.

The result is that the polytechnic enjoys a 1:19 average staff : student ratio with the worst ratio (in economic terms) a healthy 1:15.



Two views of Bristol Polytechnic's new site: (above) the faculty of business studies and library, (below) a student village.

The polytechnic's departments are large and cover a wide range of subjects. Staff appear to be satisfied with developments and an internal system of "organic democracy" appears to offer opportunities for new academic ideas to get off the ground.

Mr Jim Harris, the polytechnic librarian, expressed it this way: "What I like about working in Bristol Polytechnic is that when you put up an idea, they are prepared to consider it and find the money if possible. One does not have to wait for someone's permission before one can spend a few pounds."

This attitude pervades the staff who can, even without necessarily going through their own department, put forward plans for new courses. If these can be justified in terms of resources, they can become part of the academic programme. The freedom for academic development, however, does contrast with the rather large number of petty controls which seem to beset the administration.

Students complain of repairs taking months or not even taking place at all, of blocked lavatories, of special permission required to repair door handles and of petty controls exercised by local authority bureaucrats in personnel staffing.

One administrator, who used to the inflexibility in staffing and poor salaries in relation to other local authority work and at Bristol University.

The local authority, however, feels that its own policy has benefited the polytechnic. Mr Derrick Williams, chief education officer, said: "Friction between the local authority and the polytechnic can be healthy. It helps the polytechnic to scrutinise its planning policy and financial programme."

Mr Norman Reece, Conservative chairman of the Avon Education Committee, said that the polytechnic had probably benefited by the local authority's stringent financial policy, since it now is a good position to survive in a cost conscious world. The local authority had no intention of backing down on its commitment to develop the polytechnic, although if further cuts in public spending were announced by the Government, the polytechnic would take its proportionate share.

The polytechnic's new director, Dr William Birch, a former professor at Leeds University, will face a difficult job in steering the polytechnic towards expansion in the future. But given that he can maintain its good academic reputation in face of an adverse economic crisis the prospects for Bristol are not too

The sociological Noah preaching honesty in an ark of rejects

Alvin Gouldner is the American prophet of the coming crisis in western sociology. Tall, with striking red hair, he is well known at sociological gatherings for his magisterial pronouncements on the state of the discipline. There is something surprisingly Old Testament about a man most of whose friends would be found on the New Left.

The biblical metaphor is Professor Gouldner's own. He says he is a latter day Noah striving from his academic post in Holland to herd together the rejects and deviants from the sociological establishment into the ark of the learned journal he edits, *Theory and Society*. He stands apart from his former colleagues in the sociology departments in the United States, judicious and critical, succoured by Kant, speaking for the "ecumenical intellect" and not in the least abashed that sociology has not yet found its Mount Ararat.

Before he scaled his magic mountain Professor Gouldner was best known for his early work on industrial bureaucracy and an imaginative discussion of the origins of social thought in a book called *Enter Plato*. What marked him out from his generation was the growing emphasis in his writing on the need for personal honesty on the part of the sociologist and for reflexivity on the part of the discipline. Sociology, in other words, needed to be honest about itself.

But Professor Gouldner's preoccupation with his own biography had led some critics to accuse him of being too interested in himself to be much of a social thinker. He provides the ammunition for such charges. He is a pungent phrase maker and in one of his books he wrote of "swimming down into the inky waters of the self". Professor Tom Bottomore of Sussex University wrote sharply recently of his "narcissism" and turning of public issues into personal problems.

In some ways Professor Gouldner's biography is a good map to the progress of modern sociology. After some years of "footslogging in the empirical dustbowls" in the United States—again his own colourful phrase—he became associated, together with Irving Louis Horowitz whom he had brought to the Washington University, St Louis with the radical fringe in American sociology, situated somewhere between C. Wright Mills and Herbert Marcuse.

Professor Gouldner's first degree was in economics and mathematics and he still keeps faith with empirical work. For all the critical stance, he says, he has no wish to train students to kick a computer console every time they pass one.

At a recent conference in Amsterdam he lost patience with a representative of one of the new schools in sociology that has virtually abandoned looking at the real world for the sake of abstract methodological discussions.

He told him: "It doesn't matter to you what the topic is, the important thing is to flash it and unzip it and go back to talk about analysis.

"You are the oldest fashioned form of methodological pervert that I end up being greatly bored with. When I was a graduate student I said to Lazarsfeld I would like to study trade unions. He asked briefly what were my assumptions and methods, said goodbyes and I went out to study them."

Professor Gouldner spent time in the middle part of his career on some of the intellectual problems posed by Professor Talcott Parsons who is said to be one of the great conservative influences. Gouldner wrote a well known paper on "reciprocity" the theory of exchanges between two social units and the rules underlying them.

By the 1960s his radical stance was apparent. In another important paper called "Anti-Minotaur", he attacked the idea of sociology being free from the values of the social investigator. The groundwork for his work on the strains and stresses in modern sociology was being laid.

The Coming Crisis in Western Sociology made Professor Gouldner's name as an international figure and achieved an immediate *succès de scandale* in the United States. It

styles: "Social theorists today work within a crumbling social matrix of paralyzed urban centres and battered campuses. Some may put cotton in their ears, but their bodies still feel the shock waves. It is no exaggeration to say that we theorize today within the sound of guns. The older order has the picks of a hundred rebellions thrust into its hide..."

The book, published in 1970, contains a discussion of recent social thought, including a sympathetic though critical account of Talcott Parsons and what some people took as the first serious placing of new developments like "ethnomethodology". It concluded that the dominant sociology in the west would somehow marry with the revisionist sociology beginning to be taught in the eastern bloc. This was inadequate and Gouldner contrasted to it "reflexive" sociology which included history and philosophical anthropology and rested on a somewhat vague notion of the honest man.

The book was, he says, a "political act" trying to create space for the new tendencies, the new possibilities of sociology that were being stifled by traditionalist orthodoxy. On the other hand, the Germans greeted the book differently, seeing it as a work in the sociology of knowledge and simply as an intellectual document.

Professor Gouldner encountered Marx as an undergraduate and became personally acquainted with members of the Frankfurt school of critical Marxists through his mentor, Professor Paul Lazarsfeld. Despite his critical sympathy with the Frankfurt school his own intellectual rapprochement with Marxism has come late in life: he is at present working on a magnum opus on Marxism which many sociologists are looking forward to with enthusiasm.

The journal *Theory and Society* published in English by Elsevier of Amsterdam, is intended to be a kind of free market for new and deviant ideas. Professor Gouldner's collaborator at the University of Amsterdam is Professor Derek Phillips, another American expatriate who spoke, of the need to fight abstract tendencies in the journal.

Professor Gouldner says: "It takes in all sectors of the intellectual slum neighbourhood. The impulse behind it was to provide an umbrella to prevent sectarian narrowness and discourage the cannibalism of competing new ideas."

The European climate is more philosophical than the American and Professor Gouldner says he came to Amsterdam like a medieval wandering scholar attracted by the new possibilities offered in a different setting. Professor Phillips, a friend of Sancho Pansa in his blunt suspicion of the pretensions of some new theories, said their movement from America was more of a political act. Both are a little unenthusiastic about Dutch higher education.

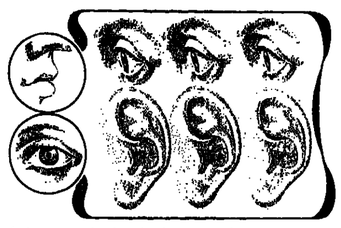
So Professor Gouldner stands above the international melée of competing theories, an impresario of radical thought. But the ultimate synthesis will not come, he says, from take an equal bit from each theory, from everybody getting his two cents' worth. It will not come from within sociology alone: either and *Theory and Society* stands for being open to movements in other fields and disciplines.

But the rock of reason on which Professor Gouldner stands is tiefe and he is the first to admit this. On the one side, reason in the Kantian sense has its limits. At a certain point all the ideas and theories have to encounter the real world, either through experiment or politics.

On the other side, sociology embodies reason, or should do. Professor Gouldner's Noah's ark is a reasonable vessel and he is not so dogmatic that he cannot see that establishment sociology still contains quite a few "rational gundles" which his mariners ought to whip in and get. Those of us on dry land might be forgiven for doubting whether in the last analysis the new European craft will withstand the waters better than the old-style American ship he has left behind.

David Watson

Uses and abuses of project work



When discussing projects generally, there is little point in trying to describe them in terms of practical activities: for not only will the activities vary from subject to subject but so will ideas on what is practical and what is not. A more useful alternative is to consider the expectations normally attached to a student's performance which can be identified by two broad categories of aims.

The first comprises what might loosely be termed "subject related aims". Students would, for instance, be expected to demonstrate a knowledge of concepts and principles, of basic manipulative skills and of specific techniques and methodologies in problem solving, all related to a particular discipline.

The second category extends beyond the subject matter to more "general educational and social aims". Included here would be the need to demonstrate higher level problem solving skills (analysing, synthesizing, etc); creativity and originality; the capacity to accept responsibility; the ability to plan and execute a programme of work and to communicate well; to work well with others; and personal qualities such as foresight, initiative, adaptability and perseverance.

Although subject related aims may still predominate, particularly in some science and engineering courses, there is evidence of a growing trend which lays more stress on broader educational and social aims.

There are various reasons for this. Subject related knowledge and skills can normally be taught in other ways—through lectures, seminars, tutorials and laboratory courses, programmed instruction, and so forth.

The project as an alternative is often regarded as inefficient and expensive, providing too much depth instead of broad content coverage. In addition, graduates are sometimes obliged to work in fields unrelated to their qualifications and a broader education may be demanded by some employers. Moreover, broader educational aims appear to provide a much sounder basis for developing attitudes towards learning appropriate for "continuing" education: an ability and desire to learn is acquired rather than competence in a basic discipline.

Now if we accept that projects are valuable, and their growing popularity seems to suggest that they are, and if we also accept that for many teachers and students their value lies beyond the acquisition of subject related facts and skills, three important questions arise.

First, where do such projects come from? As project work becomes more popular and as students are allowed a greater say in their selection, the search for good, stimulating, useful, relevant and novel activities becomes progressively more difficult. Some departments are now seeking a much wider area from which to select their projects. Others are attempting to find out what is happening elsewhere and there are two interesting examples of inter-institutional collaboration.

The HELP (Higher Education Learning in Physics) project aims to develop a scheme whereby a "bank" of project titles and descriptions can be made available to those participating in the venture. In engineering, the GEE (General Engineering Education) project is compiling a list of ideas for project work in connexion with student research into urban problems.

Teachers are also looking towards industry and the local community to provide the "problems". Links with industry are not new as the technological universities and polytechnics have already shown how other institutions are seeking similar outlets. University College of Wales, Cardiff, for example, has recently set up an industrial centre to offer advice on waste recycling to firms on a consultancy basis. Students from several departments will find the opportunity for research via this centre.

Involvement in local community affairs also provides fertile ground for the development of project work. At the University of Salford a community advisory centre has recently been set up and students from environmental studies and town planning will undertake projects into local problems under its auspices.

The department of electrical engineering at Imperial College, London, has implemented a programme of projects in which students work in teams in the Greater London area on such problems as the possibilities of providing light assembly work to alleviate local unemployment, or the improvement of meals delivery services. At the University of Kent, there are plans for a mobile law clinic manned by students which will visit outlying areas of Kent offering a service to the public.

Secondly, how should projects be used in a course? Here we encounter the breadth versus depth argument. Projects, by their very nature tend to focus on a particular issue and therefore other content is not covered. Some would maintain that it is increasingly difficult to cover essential content in the available time, whereas others suggest that what can be achieved through a good project in terms of motivation, confidence, and research experience far outweighs what is lost by a reduction in subject matter. The logical extension of a "project-based" degree as in molecular science at the University of Sussex.

Whatever balance is struck between project and other work there is still the problem of deciding its purpose and place within the course. Many teachers must have grappled with this question: "Is the project a learning experience which is intended to assist the student in acquiring certain desired qualities, *or* is it an opportunity for practising them, *or* is it basically a means of assessing them? If it is to be concerned with acquisition, then what evidence is there that it does, in fact help students. If it is concerned with practice, then what happens to those who have not developed the skills with which to practise, and if it is concerned with assessment, are we really assessing something we have set out to develop during the course?"

One argument is that, in many cases, all the project does is to present the opportunity for the already more independently minded, creative or research orientated students to exhibit certain inherent or accidentally acquired characteristics. This has led some teachers to perceive project work not as an isolated activity, but as the coalescence of several aspects of the course which have been deliberately created and directed with this end in view.

If certain skills are to be demonstrated by the student then (a) he should know what these are and (b) he should have the opportunity to practise them earlier on in the course. Furthermore, the time allowed for planning and negotiating with a supervisor is regarded as a crucial part of the exercise and some departments go to considerable trouble to formalise these earlier stages.

At Bath University, students in the engineering departments enter into a form of contract in which a specification of the task, timing and anticipated outcomes are detailed.

Thirdly, how should projects be assessed? As projects span a broader area, provide a much greater diversity of problems and approaches and demand qualities and skills such as application, adaptability, perseverance and cooperation, assessment becomes more difficult. Certain changes have emerged as a result.

A supervisor cannot be constantly present but diaries or other "log type" records can prove invaluable and greater weight is now attached to these by some teachers. Also, at Bristol University in the physics department, members of staff, other than the tutor, interview the student several times during the course of his research in order to gain an impression of his work; their comments are used in the final assessment.

Assessment can also be spread out more. The scheme adopted in the economics department at York, for instance, allots a proportion of the total marks for various stages of the work including the first draft of a report, a presentation in a seminar, and further reworking of the report.

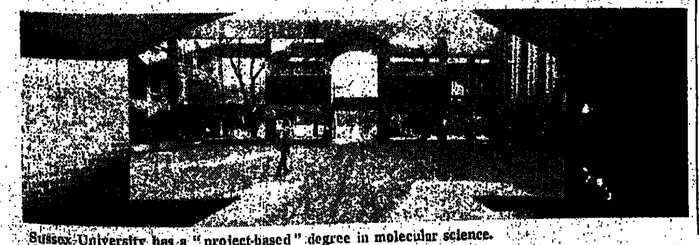
It might reasonably be asked, in view of the diversity of work now undertaken by students, whether it is possible to standardize marking at all and whether it is possible to convert the impressions gained from a number of different criteria into an overall mark. One approach is to attempt greater precision by defining and weighting objectives and measuring progress towards them. Another is to provide a written profile which does not rely upon quantification but examples of the latter are, as yet, quite rare. A compromise is sometimes reached in which projects are simply compared against three or four broad qualitative descriptions, for which the criteria have been previously determined and graded A, B, C or D.

In general a look "across the board" at trends in project work in higher education can at the same time be both satisfying and disconcerting. The value of projects has certainly been realized, students generally are highly motivated towards them but their place and use in undergraduate courses is an area which has been only superficially explored.

Whilst good projects, properly incorporated into a course, well supervised and carefully assessed can contribute much towards the aims described earlier, poorly selected and badly integrated projects will often turn out to be the waste of time so often proclaimed by the critics.

Eric Hewton

Dr Eric Hewton is a member of the Nuffield Group for Research and Innovation in Higher Education.



Sussex University has a "project-based" degree in molecular science.

What kind of activities are students involved in as part of their studies? How do they learn? Beginning this month, academics who took part in the Nuffield-sponsored Science Teacher Education Project will discuss in a series of short articles the value of different kinds of resource material in supporting a more student-centred system of learning.

The first article is by Clive Sutton, School of Education, University of Leicester.

The active student

Discussions of teaching in higher education are frequently presented in terms of the value of this or that "method". Lectures may be compared with various forms of group work, and research papers are written with titles such as "Students' Reactions to Different Teaching Methods".

Yet to think about the tutor and his methods does not necessarily create a more effective contribution to the students' learning. Vocabulary reflects assumptions, and in this case it shows how much we are still influenced by the idea that the lecturer or tutor is at the centre of the stage, that he is the principal actor, and it is what he does that matters.

But what about the students as learners? What scope are *they* given in any particular teaching/learning situation. What are *they* asked to do, and are these tasks educationally productive? For example, what kind of activities in a course enable them to engage in the tentative and inexplicit talk which some experts on language now regard as central to the process of grappling with new concepts?

If one does focus on the learner, the word "lecturer" ceases to be just a title, but becomes instead a description of one of many possible roles. Skills required of a manager of the students' learning, of a provider of data, of a provocateur and guide, become more important than skills required of an instructor or presenter.

Resource materials to which the students have direct access become the focus of effort in planning a course. One searches for a greater variety of these, beyond the ubiquitous reading list and duplicated hand-out. One looks for different ways in which students may use them beyond that of an illustration of one's teaching.

Resources materials are important if students are to be encouraged to analyse, criticize, speculate, solve problems, create materials, and gain confidence in their own abilities.

The materials tried out between 1970 and 1973 under the auspices of the Science Teacher Education Project, and now published, included videotape and audiotape recordings of many different kinds, still photographs, case studies, collated pupils' writings, programmes, reprints, and a great variety of worksheets and guides to observation or analysis of these materials. In some respects they are all similar in having the following functions:

Essentially they provide data which exercises the students' intelligence and encourages them to be more active mentally. The tutor is no longer the centre of attention and the main source of information; the responsibility for thinking and learning passes partly to the students and the tutor becomes a guide to their learning both in selecting data and in provoking and guiding their enquiry into it.

Secondly, resource materials provide vicarious experience under conditions which allow for reflection and discussion of its meaning and implications. Although students should not always have to rely on such experience, it sometimes can be superior simply because it does allow the student to look more slowly and carefully at one aspect of a problem at a time. In addition all these materials have a built-in facility for "action replay"—they can be examined over and over again.

What of the staff member? Is he just another resource? Perhaps so, but in that case certainly a rather versatile one. He or she chooses the material for the students and guides their study of it.

This can include asking them to criticize the data, contrast different parts of it, analyse it, take measurements from it, evaluate it, or to create answers to problems which it raises. In order to set such tasks, the tutor probably draws on his knowledge of what is pertinent and not always obvious to the beginner.

Questions, worksheets, study guides, and observation record sheets are simply analytical tools without which resources frequently have only a superficial impact.

If resource materials are as important as is suggested here, then progress in university and college teaching depends on spreading awareness of their potential, and of the many different ways of using them.

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Warwick students demonstrating

Police powers on the campus

On 21st April this year, in pursuance of a resolution of the students' union to effect an "orderly and disciplined occupation" of the university telephone exchange and Senate House, about 200 Warwick University students staged a sit-in. Some three weeks later several hundred policemen entered the campus and the students' unlawful occupation of the buildings ended.

The reason for the police presence was that on May 9, the Court of Appeal decided that the university should be granted an order for immediate possession; thereforth the law would follow its inexorable course, the police officers being present to ensure the execution of the court order.

Had the political decision not been taken to obtain this order to remove a militant minority whose actions had caused antipathy among the other students, then the police would have been loath to assist in the removal of students staging a peaceful sit-in. Apart from the vexed question as to whether they would be acting in the execution of their duty, there is the political consideration of such direct police involvement in a situation where there is no violence or serious public disorder.

Although a criminal peg such as conspiracy might be used to hang the helmet on, the police decision is invariably dictated by the degree of physical injury occasioned or anticipated.

Police powers to enter universities or other premises, even against the wishes of the lawful occupiers, has never been clearly defined. Where there is no written authority of a court or magistrate, all that can be said, with certainty in this context is that there is a power to enter where it is necessary to quell a serious breach of the peace. Again, the police would be even more reluctant to use their powers unless such entry was imperative.

The decision of the Court of Appeal is eminently sensible; the order was granted even though only five of the trespassers were identified, as it was considered that the university had taken "reasonable steps to identify the others."

One judge accepted that in some circumstances an order would be granted even though none of the unlawful occupiers could be identified — an answer to the tactician who employs a fluctuating and mass occupation.

In the knowledge that the machinery of the courts is available and that the summary procedure can be used even when it is not practicable to identify the trespassers, the vociferous minority might be less prone to sit in where their views are not shared by the majority, since their future depends upon whether the university deem it politic to apply to the court for an order for immediate possession. On the granting of an order, the character of police involvement is changed; their presence on the premises as the necessary outcome of civil proceedings will be expected, and presumably more acceptable than if they were to act of their own volition.

Portia

An occasional series on legal aspects of academic life

Barrie Jones and Elizabeth Whitelegg say the Open University is proving . . . .

Attractive to the children of the workers

The Open University has more students than any other British university or polytechnic. It is an unusual institution and in many of its main features it is nearly unique.

It differs from a conventional university in that it has no academic entry qualifications; has no centre in which students are concentrated; has very little face to face tuition of either the lecture or the tutorial kind; has no undergraduates under 21; puts as much effort into education as it does into research; offers complete cross discipline and cross faculty freedom; has highly motivated students.

Yet it is far more than a correspondence college because: it uses a multi media approach; the texts are properly printed semi-programmed learning devices; there are a few tutorials on a regional basis conducted by part time staff (full time at other universities and polytechnics) who are often willing to be contacted ex-tutorially; there are summer schools manned by part-time and full time staff.

Furthermore, the full-time academic staff are recruited from the same labour pool as that used by conventional universities (indeed many of the staff came to the OU from permanent academic posts in eminent British, Canadian, Australian and American universities).

The OU began taking in students in January, 1971, and in 1973 the first graduates with ordinary degrees emerged, and the first batch with honours degrees emerged in 1974. The idea stretches back to 1964 when the then new prime minister Harold Wilson initiated the idea and put it in the safe hands of one of his ministers, Jennie Lee. We thus owe our birth to the Labour Party, as one commentator put it "(the Open University is) a child of a bizarre marriage between modern technology and the traditional idealism of the Labour Party".

The justification of the existence of the Open University has always been in terms of "the university of the second chance"; it is for those over 21 who for whatever reason did not pursue university level education at the normal age (in Britain) of 18 to 21. It can offer anyone such a second chance because:

- It has no academic entry qualifications.
- It enables students to pursue their studies at a range of rates so that people with full-time jobs can progress effectively, and those with more time on their hands can study at something like the normal university rate.

It was never expected that the students would be dominated by middle-aged people who had left school at 15 with no formal entry qualifications and no interest in academic pursuits: it is a tough way to get a degree and hence it is no surprise that most of our students are highly motivated and with some secondary or tertiary or professional qualifications (or both — within easy hindsight).

Nevertheless the second chance is there for those who would take it, and there are three groups of people in whom one takes an especial interest:

- students with working class parents;
- students who have insufficient academic qualifications to gain entry to a normal university or polytechnic;
- women.

All these groups have been, in some sense, academically under-privileged. Before we look at each of these groups in turn consider figure 1. It does not show the feature predicted by some that applications would quickly dwindle to an uneconomic level. Figure 1 prompts the question: "how do we whittle down the number of applicants to the number initially registered?" The answer is by date of application, with minor variations according to regional and foundation course quotas. (Students have to take either one or two foundation courses on entry, and nothing else. There are foundation courses in science, technology, mathematics, social science, and the humanities.)

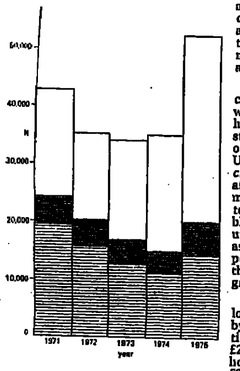


Fig 1: Number of students by year of entry. Upper numbers are total applications for years indicated. Middle numbers represent students initially registered for one or two foundation courses. Lower numbers represent students finally registered for one or two foundation courses after four months.

We have aggregated the social classes into "blue collar" and "white collar" as indicated in Table 1.

The social classes are as follows: I professional; II intermediate; III(a) routine non-manual; III(b) skilled manual; IV semi-skilled manual; V unskilled manual. They very roughly correlate with income in the obvious manner except that III(b) persons are usually richer than those in III(a).

Columns two and three show the breakdown in 1971 and 1973 respectively of the occupations of the OU students excluding housewives (more than 99 per cent of whom are housewives). There is a strong white collar bias. In fact, in every year 1971 to 1975 inclusive, new students entering the university (assuming finally registering) have been such that about 90 per cent consist of (in rough rank order): educational personnel (mainly teachers with certificates of education); houseworkers; technical personnel; professional and arts; clerical and office staff; administrators and managers; scientists and engineers.

However, to make comparisons with conventional universities one has to look at the social class of the *parents* of Open University students. These figures are given in column one (for 1971) and compare very favourably with the figures in column four, which apply to the social class of fathers of students at conventional universities in Britain in 1971, and almost as favourably with the figures in column five, which apply to the social class of fathers of students entering the then Enfield Polytechnic on CNAA degree courses in 1968. This last group was chosen because it represents the nearest thing in Britain to the Open University set-up. Column six gives the 1966 national census of economically active males between the ages of 45 to 59 years: this gives a point of comparison with the general population for columns four and five because students represented there have fathers, the vast majority of whom are between 45 and 59 years old.

Thus although it cannot be claimed that blue collar workers who from column seven (excluding housewives) can be seen to constitute 51 per cent of the population over 21, are flocking to the Open University, we can claim that *children* of the blue collar workers at the Open University constitute a much greater proportion of our total intake than do the *children* of blue collar workers at conventional universities and polytechnics. Also as columns two and three show, the percentage of OU students who are themselves blue collar workers is growing.

There is no disincentive to the lower income groups (V, IV, IIIa) by virtue of cost: the cost of getting an ordinary degree varies from £226.80 to £388.80, and for an honours degree it varies from £276.80 to £519.80 depending on the number of courses taken with summer schools. When it is remembered that four years is a norm for taking an ordinary degree and six years a norm for taking an honours degree then the weekly cost is in the region of £1.50 a week, which in Britain is currently about 8 per cent of the weekly full time pay for a family of two adults and two small children, and is less than 10 per cent of the weekly income of even the most poor families. In many cases students can get partial financial support from their local education authorities, or from their employers.

The highest formal educational level achieved by applicants at initial registration for a place at the OU in each year 1971 to 1975 is shown in Table 2.

Level one corresponds to a university bachelor's degree and its equivalent or higher; level two corresponds to some other form of tertiary level education, for example, teaching certificate, nursing qualification and so on; level three corresponds to an educational level that would have allowed the person concerned to proceed to level one or two, but who for some reason did not. Level four corresponds to an educational level insufficient to allow progress to levels one or two.

It is level four that is of particular interest: the Open University is the only institution at the tertiary educational level open to such people.

It is particularly encouraging to see that this group of people comprises an appreciable percentage of each year's initial registration of new students.

The survival rate to some sort of OU degree for each of these groups is very roughly (±5 per cent) but surprisingly as follows: level 1, 56 per cent; level 2, 66 per cent; level 3, 55 per cent; level 4, 53 per cent. These figures are remarkably independent of previous *formal* educational qualifications. It is particularly encouraging to see the comparably high survival rate at level four.

Figure 2 shows the way the numbers of new men and women students (at final registration) have varied over the time the OU has been in existence. As conventional universities about 66 per cent of new undergraduates are men and of students at such universities who are over 25 years of age about 76 per cent are men. The OU thus seems to be on the way to overcoming the sexual inequality at 18, the normal age for entry at conventional universities.

The chief reason behind the increase in the percentage of women is that the number of houseworkers, of whom more than 99 per cent are housewives, has steadily increased as a fraction of our intake. The chief reason behind the decrease in the percentage of men is the steady fall in fraction of our intake who are male teachers.

Women survive marginally better than men, but this is not a significant fact because of the one breakthrough we have not, and could not be expected to achieve, namely to overcome the strong preference in women for arts and social science. Table 3 shows the percentage of men and women applicants in 1974 for each of the foundation courses.

The significance of this for survival is that we know by looking at men students and at all students that the pass rate in arts and social science courses is greater than that in other faculties' courses (with the exception of the Faculty of Education which does not appear in Table 3, because it has no foundation course).

The sexual bias in Table 3 represents our inheritance of the prejudices against science, mathematics, and technology for girls that existed and regretfully continue to exist in Britain at primary and secondary levels. It is not necessarily the teachers and syllabuses that are to blame: the cultural milieu plays its part also.

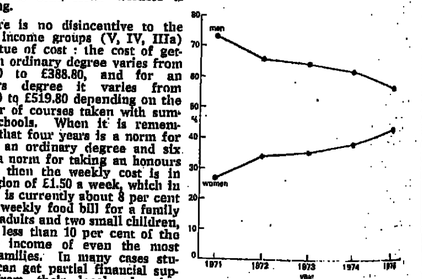


Fig 2: Changing pattern of new men and women students at final registration.

We are of course "open" in a very obvious way: anyone can buy our texts and watch our television programmes. There is a considerable amount of qualitative evidence that many conventional universities and polytechnics in Britain, and even abroad, are modifying courses as a result of contact with OU material. There are a few cases in which the OU course has almost entirely replaced existing courses so that the "lecturer" takes on the role of tutor. In some instances changes in content and method have been brought about at conventional institutions by student pressure generated by contact with OU material, though it is more usual for the teaching staff to ring the changes.

The author would like to thank Naomi McIntosh, Valerie Morrison, Alan Woodley and other members of the OU Survey Research Department for supplying most of the statistics.

Extended accounts of the data in this article are to be found in: Naomi McIntosh and Alan Woodley, *Paedagogica Europaea*, IX, 1974, No 2 and Naomi McIntosh and Valarie Morrison, *Higher Education Review*, Autumn, 1974.

Table 1

Social class	Open University % 1971	1971	1973	Other institutions % 1971	Census % 1966	
	1	2	3	4	5	6
"White collar" I, II, IIIa	46	46	52	71	33	49
"Blue collar" IIIb, IV, V	52	53	48	29	15	51

Table 2

Level	1971 (%)	1972 (%)	1973 (%)	1974 (%)	1975 (%)
1	4.4	5.4	5.9	6.4	2.7
2	51.2	42.6	43.7	41.1	38.3
3	14.0	14.6	14.0	14.3	14.8
4	30.4	37.4	36.4	38.2	43.2
Total %	100	100	100	100	100

Table 3

	Humanities	Social Science	Science	Mathematics	Technology
% Women	56.5	45.5	26.7	17.1	6.0
% Men	43.5	54.7	73.3	82.9	94.0

A cycle of deprivation in academic publishing

Peter Hopkins discusses the reasons why publishers are finding it difficult to add more academic monographs to their lists

On a recent visit to a northern university, the sort of Academic Cook's tour that all academic publishers are familiar with, I thought it would be a good idea to drop in on the university's librarian, a sober enough man whose sojourn north of Watford had obviously sharpened his southern wit—because as we pumped each other's hands up and down, he smiled and said: "Funny, isn't it, publishers can't afford to produce books and we can't afford to buy them".

This was a little direct for me; but no academic can fail to be aware that the books that contain the ideas and knowledge that he is interested in, academic books, scholarly books, call them what you will, are nowadays very expensive. I am not going to deal with textbooks here because they are an entirely different matter (although they are by no means free of problems either). What I'm talking about are, whether they be small, or as they more frequently are, large, those respectable-looking tomes that make a well-established publisher produces, which cover all subjects, sciences, humanities or arts, and may be research findings, pieces of theoretical writing or works of imagination and scholarship.

These serene volumes, between whose covers we find the very stuff of knowledge and academic debate, are now being published at prices which elicit from publishers, authors, booksellers, librarians and readers a simultaneous shudder. We call these expensive little indulgences "monographs".

Taken individually, one could often dispute whether the publication of any one monograph has made the world a better place or whether the frontiers of human knowledge have been pushed forward; this is really too much to expect of any one monograph, even a very good one. But taken as a group, their publication, I believe, represents an extremely important element in international academic life and, if one takes academic life seriously as I do, a vitally important element in the civilised world.



"No doubt research would go on and Wittgenstein would have written his Tractatus even if we had not had scholarly publishers, but publishing is important in that someone with know-how can present a man's work in an efficient and energetic way. . . ."

I think I should stress *their publication* because no doubt research would go on and Wittgenstein would have written his *Tractatus* even if we had not had scholarly publishers. The act of publishing is only important in that someone with know-how can present a man's work in an efficient and energetic way to those who will be likely to want to read it and respond to it the world over. Some publishers have become very good at this over the years and have developed a knack, albeit not an unerring one, of sifting out from the vast amount of material that is written up that which is worth publishing because it is either useful or innovatory or, if one is lucky, both, and brilliant too.

These snappers-up of scholarly trifles like to think of themselves as quality publishers, but of course those who are still with us today are also those who have a sound and even base commercial nose. They are prepared to take on things which, when measured with a sliderule look decidedly unappetising and of course they sometimes remain so; consequently a financial loss has to be viewed through some nice rosy reviews: "in journals that matter by people who one takes seriously".

But if you decide that quality is what you are going to make money out of, then that is the thing to stick by. Publishers such as these often end up using the income from very profitable back list monographs that have suddenly become big sellers, or from more market orientated books, to support today's output of rather non-commercial monographs, some of which, one hopes, will not only be favourably reviewed, much used in other books and well footnoted, but may actually start selling startlingly well, given time.

But of course, as the old adage has it, time is money and when the country is experiencing a recession and raging inflation simultaneously, then waiting around for these books to "take off" becomes a little unnerving. Monographs, which are usually twice as long as one has contracted, which have perhaps as many as three hundred footnotes, which have tables and diagrams and maps and which are often written for a potential market rather than an established one are not the sort of things that are easy on investment, much as we love them. They are expensive, they call for painstaking editing, careful designing, costly setting, much proof-correcting, good quality paper, beautiful binding and a lot of storage space to keep unsold copies for perhaps up to five years and in some cases twenty! This is the sort of service we academic publishers used to supply very happily until the recent world economic crisis which meant that several things happened all at once:

- Costs of production rose very quickly and have gone up by an average of more than 30 per cent per year since about 1971.
- Locking money up in slow-selling, expensive books meant that when and if the profit came it had been eaten away by inflation.
- Academics and libraries could not keep pace with the rise in book prices and therefore could no longer support us in the same way.
- Increased costs meant higher prices, lower sales, then lower print runs and then even higher prices and so on—no doubt Sir Keith Joseph would have called this the "vicious cycle of deprivation" whereby academics were deprived of books to publish and to read.

I am sure that almost everyone reading this article knows of a case where a project or manuscript, once accepted very happily for publication, is now unlikely to proceed beyond the sponsor's desk. This is heartbreaking for the author, and although someone in such a "wronged" position may find it hard to accept, it is upsetting for the publisher, too; for above all else publishers who do publish monographs often view them as something more than straightforward commercial propositions.

In fact, what is happening at this moment, namely, the shunning of monographs by commercial publishers and even university presses, is going to have very serious implications for the healthy ongoing of academic life in this country and elsewhere.

To my knowledge there is no way of getting published in this country by the state unless one has done a research project for one of the ministries which is then produced by HMSO—I say produced rather than published and I hope HMSO will forgive me for this. In Britain the fruits of academic research, thought and debate have always been left to the academic publishing entrepreneurs to pick through and publish and it is true enough that if these commercial publishers are to remain solvent (and it is not easy for any business in this country to remain so at the moment) then they must inevitably resort to the other parts of their list that contain textbooks and books for the general reader which are hoped-for larger sellers and a substantially less complicated book can give the financial rewards quicker before inflation has eaten them away.

Talking to my colleagues, to authors up and down the country and to other people in the book trade, I can assure you that this is what is happening and is increasingly happening. The implications are serious and so far as I can see have not so far merited public debate, either because people are not aware that books are published via publishers or because people do not like talking about work they have failed to get published. Publishers themselves are very reticent even in public and do not usually take part in public debates. They are also, along with their authors, terrible liars when it comes to sales figures and what is really mysterious is that when they lie about sales figures they lie upwards and a 600 monograph sale is often transformed by word of mouth gossip into a 2,000 sale.

The Royal Opera House, excellent as its productions are, does not lie about the fact that it loses a great deal of money every year and but for a subsidy from the British people, who are not great opera fans, would have ceased to exist a very long time ago or would have been reduced to putting on *The Ring* with three singers and a broken kitchen stool. This reticence is further compounded by the libraries of academic institutions which are very reluctant to let us have overall figures on their budgets although we would only want those figures to show that they, as I suspect, are not keeping pace in real terms with the price of books.

A recent report by the National Book League on university library expenditure had to rely on 1968-73 figures and their gloomy conclusions, which ended with the sentence: "If trends established in this short report are a reasonable basis for considering the future of library spending, it appears that the prospects for books is a gloomy one" was severely attacked; but I would none the less consider that what the report showed, namely that public spending on academic books was decreasing in spending power, was basically true.

In a letter to this newspaper in March this year, and there have been some similar letters elsewhere, Professors Platt and Matthias and Dr O'Brien of Oxford University, called for a National Research Series, sponsored by the Government, to help the publication of monographs. They also asked: "Are the implications of the current recession in academic publishing appreciated?" I have already argued that they are not appreciated but, at this moment, I would not support a National Research Series because it sounds very dull and, with the combination of direct Government money and a board of academics, I would see it as being doomed to an august and continuing failure. I resolutely believe that commercial, semi-commercial, or university publishers of monographs have served the academic community and the cause of scholarship extremely well, not to mention their individual authors, and I believe equally firmly that a way will be found for them to carry on doing this. They have a degree of independence, experience, competitiveness and commercial need that should not be sacrificed.

In the late 1960s academic publishing experienced a boom which led to a great increase in the number of academic books produced. Unfortunately I cannot separate textbooks from monographs in the figures in the table below (which is taken from *The Bookseller*), but I include them out of interest and have chosen four subjects which are fairly representative. The reason I mention this boom, which, in case you are in any doubt, is over (the 1975 figures will be much lower), is that some people believe that we are not experiencing a recession in academic books but merely a return to a more healthy non-boom state.

These people argue that books which should not be published now simply will not be published, and that only the really worthwhile books will get through.

This is undoubtedly true to a certain extent, but it would be imbuing a nasty economic crisis with too much good will to imagine that the bad die and the good live. I certainly know from my own experience that this is not happening and many innovatory and worthwhile books which ought to be published and which, if published, would eventually be influential and even commercially successful, given time, are now not seeing the light of day.

	1968 New Books	Reprints and New Editions		1971 New Books	Reprints and New Editions		1974 New Books	Reprints and New Editions	
Chemistry and Physics	805	116	1,001	113	679	74			
History	1,647	569	1,433	473	1,193	385			
Sociology	580	127	747	156	757	116			
Literature	1,241	302	1,100	313	757	140			



"The shunning of monographs by commercial publishers and even university presses is going to have very serious implications for the healthy ongoing of academic life in this country and elsewhere, and this is what is happening at the moment."

How are publishers and authors coping with these increasing difficulties? Some publishers are either saying they can't publish, or they are trying to set books more economically. Authors are scurrying around trying to get subsidies or with the help of publishers' copublishing arrangements with foreign publishers. Neither of these methods can provide a long-term solution, and they often fail to do so in the short term.

All setting in a printers is costly because one uses a lot of time and a lot of skilled labour. Subsidies for academic books are very hard to come by and there is really no foundation that is happy to give anything much, if at all. In this country, although the Government is often quite generous to many sections of the population, there is no tradition of helping the publishing of academic books despite their undoubted importance and worth, and there are no plans to do so as far as I know. This surely gives some room but there are inherent dangers which must be avoided.

A publisher must keep his independence at all costs and yet anyone who gives him money has the right to demand some account of how he has used it. It often surprises me how much money is given over to research projects which never see the light of day and no doubt the various research councils are giving thought to whether a proportion of their grant money should be used to ensure the publication of worthwhile material at a reasonable price by a commercial publisher.

To come back to my original plaint, namely high prices, this is how scholarly and academic work is published at the moment. Publishers are charging relatively high prices but the truth of it is that these prices are barely high enough to support a healthy and creative academic publishing policy. We at Routledge, Kegan and Paul have decided to try to keep our prices at a reasonable level. We claim no credit for this, and we realize that these reasonable prices are still often beyond the individual academic's pocket and that we have to rely on the real enthusiast and the library or institution.

Some publishers have gone the whole hog, given up the individual buyer as a bad job and decided that libraries and institutions will have to pay £10, £20, £30, £40 for their knowledge which will be used by so many. If these prices are charged (and they are quite fair prices when one considers the products), then there is a reasonable chance of a profit because a small quantity is printed and the initial investment is smaller.

Book prices in this country are artificially low and this is seen particularly in the lists of the paperback houses who have done a good service in one way but a disservice in another to the cause of scholarship. Side by side can these publishers lists one often sees a popular novel selling, perhaps, 100,000 copies and more, retailing at the same price as an esoteric work of philosophy which has sold perhaps, in this very cheap form, some 15,000 copies. It is good to make academic books available at 60p but eventually we may be cost (or rather the academic houses do). In the 1840s, for a work of scholarship one would have paid at least a guinea. When I came to Routledge in 1968, we were still publishing monographs at thirty shillings, which looks rather silly nowadays. And so the recent and rather sudden price increases have made people think, that academic books are now very expensive; and of course they are—relatively.

But, and this is a serious but, we realize that the realities of academic pay packets mean that they cannot now afford to maintain a library of their own at present prices and this in turn is the other serious factor. In addition to the non-publication of worthwhile work that is on the horizon, we have the problem that academics themselves are losing the personal book buying habit, through no fault of their own. Therefore sales decrease even more, prices are inevitably forced ever upward and academic publishers become totally dependent on a world-wide sale to institutions.

This might be an inevitable trend but it is one which I nevertheless deplore. However, selling at institutional prices only might be one way of coping with publishing monographs in the future. Another way which is gaining ground is the replacement of the book by the microfiche, which means that on a card about as big as a credit card one can find the contents of a large monograph. Making a microfiche direct from a manuscript can be done for as little as £12 and copies can follow on to order. This compares very favourably with traditional quality book production where you are invariably investing anything from £3,500 to £5,000. I don't have to spell out the advantages. But the disadvantages are the inconvenience of reading this minute card with a machine and the attendant difficulties. It is an annoying fact but one that is nothing as convenient or as simple as the book as we know it. But where you don't have a long print run and a fairly quick sale, it is a very expensive way of not making any money in *real* terms—inflation again, I'm afraid.

There are many avenues to explore and I hope some will provide answers. As I stressed earlier, we have decided, despite the fact that books are underpriced, to try to keep our individual academic buyers and also to try to stick with the never-surpassed traditional book. Our publishing policy in this area of monographs continues on course and we are fortunate as a company to have a healthy back list and a large list of general books and good selling textbooks.

This autumn, however, we begin a new sort of academic publishing which we believe will be very successful. Basically, it is very simple. We ask the authors of manuscripts for this series, Routledge Direct Editions as we are calling them, to produce their manuscript camera-ready copy direct for the printers. This is made into negatives, reproduced in the established photolithographic way, but in soft covers so our readers don't have to pay a penny more than they really need to. It sounds very easy, but we have had our traumas and no doubt we will continue to have them.

The essential aim is to get scholarly books out to those who want them as quickly and as economically as possible. By using this method selectively and in a controlled way we hope to continue what I would like to think has been a sound and innovating academic monograph policy over the years.

We like our reference books, our textbooks and our general books, but we also want to continue our large commitment to the scholarly monograph which can occasionally and quietly turn a subject on its head and very, very occasionally reconstruct our view of the world. But even if they don't do either of these things they represent our work and our knowledge and without the act of publishing them academic life would be severely hampered.

Peter Hopkins studied sociology at the University of Leicester before he joined Routledge and Kegan Paul where he is now an editorial director.

NOTICE BOARD

Chairs

Mr James Brown, Area Engineer for Africa and the Western Hemisphere, Shell International, The Hague, has been appointed to the new chair of petroleum engineering at Heriot-Watt University from September, 1975.

Miss Mary E. Dunn, Director of the Department of Office Organisation, University of Strathclyde, has been appointed to a personal professorship in the department of office organization, formerly the centre for secretarial studies.

Dr V. H. Berghahn, at present a reader in European history, University of East Anglia, has been appointed professor of history from October 1, 1975.

Dr Neil Manning Atherton, reader in the department of chemistry, University of Sheffield, has been appointed to a personal chair from June 18.

Dr George Hudson, administrative dean of the faculty of medicine and honorary clinical tutor in haematology, University of Sheffield has been appointed to a personal chair of experimental haematology from June 18.

Dr Michael F. Lynch, senior lecturer in the postgraduate School of Librarianship and Information Science University of Sheffield has been appointed to a personal chair of information science from June 18.

Dr J. L. Jowell, senior law lecturer at the London School of Economics has been appointed to the chair of public law at University College London.

Dr R. Holmes has been appointed professor of education at the Institute of Education, University of London.

Dr K. J. King has been appointed professor of English at Queen Mary College, University of London.

Mr D. S. Wright has been appointed professor education at the University of Leicester.

Forthcoming events

A workshop on "Systems science—its constraints and possibilities", organised by the North East London Polytechnic, is being held from August 3 to 8 at NELP's Anglian Regional Management Centre, Danbury Park, near Chelmsford, Essex. In addition to a lecture programme, there will be group sessions, study groups and opportunity for individual research. Fee: £75 (including accommodation, meals and conference dinner). Further details and application forms from Special Courses Assistant, North East London Polytechnic, Longbridge Road, Dagenham, Essex, RM8 2AS.

* * *

"Charles Kingsley 1819-1875: A Critical Celebration" is the theme of a residential weekend conference commencing July 18-20, 1975, to be held at Digby Hall, Stoughton Drive South, Leicester. Speakers will deal with the full range of Kingsley's interests from sanitation reforms and natural history to politics, the church, and literature. Fee: residential, £14.75; non-residential, £9.55. Further details from B. Threlfall, Department of Adult Education, Vaughan College, 51 Nicholas Circle, Leicester LE1 4LB.

Awards

The Stanhope Historical Essay Prize 1975 has been awarded to A. G. Jamieson, scholar of Christ Church, Oxford. **The Denyer and Johnson Studentships in Theology** have been awarded to P. G. Mattison, St John's College, Oxford; M. Sedgrove, Balliol College, Oxford.

Correction

In our issue of June 6 under "chairs" it was not pointed out that Dr Dominic Baker-Smith's appointment to a chair at University College, Cardiff, will be from October 1, 1976.

Noticeboard is compiled by Myrna Monsurate

Appointments

Universities

Durham
Research fellows: R. W. Banks (zoology); R. W. Dutton (Centre for Middle Eastern and Islamic Studies).

Leicester
Senior lecturer: Dr P. Sheldon (microbiology).
Lecturers: Dr F. C. Odds (microbiology); Dr C. I. Cheeseman (physiology); Dr N. B. Standen (physiology); Mr R. T. H. Stone (law); Miss J. M. Masson (law); Dr D. J. Hargreaves (psychology); Mr C. M. Richards (School of Education).
Temporary lecturer: Mr G. Syrota (law). Arts Council fellow: Mr J. Araten (creative writing).
Part-time lecturers: Dr R. C. Fraser; Dr J. M. Millar; Dr H. R. Patterson; Dr M. E. Preston-Whyte; Dr M. M. Tellis (community health).

London
Reader: Dr J. R. Henderson (physiology); Dr B. N. C. Prichard (clinical pharmacology).

Salford
Deputy registrar: Mr I. H. C. Powell (academic).
Senior lecturers: Dr I. Y. Ashwell (economics & geography); Dr A. Bradshaw (mechanical engineering); Dr L. D. Hickey (modern languages).
Lecturers: Mr J. R. Petch (economics & geography); Dr A. Fernandez-Somoza (hispanic studies); A. J. Perriot (French); G. Vogel (Germanic studies).
Assistant: Silvia Ghinetti (Italian).
Full-time post for the applied social studies course: J. Hart (sociological studies).

Stirling
Reader: Dr R. J. Roberts (animal biology).

Strathclyde
Readers: W. R. Aitken (librarian); K. Smith (geography).

Wales, Aberystwyth
Reader: Rev C. G. Williams (religious studies).

Wales, Cardiff
Reader: Mr R. E. Jones (Politics).

Wales, Swansea
Readers: Dr S. Anglo (history of ideas); Dr T. W. Bloxam and Dr V. G. Walmsley (geology and oceanography).

Queens Belfast
Senior lecturer: C. K. Boyle (law).
Temporary senior lecturer: R. P. Davidow (law).
Lecturers: J. R. Hayes (medicine); J. M. Kinsella (Spanish); W. T. Thompson (Institute of Education).

St Andrews
Readers: Dr J. J. Sanderson (applied mathematics); Dr G. Van Breda (astronomy). Senior lecturers: Dr E. G. Duncan (botany); Dr C. Mule (zoology); Dr J. A. Soulsby (geography); Mr J. L. R. Sydes (logic); Dr D. P. Tunstall (physics). Temporary lecturer: Mr J. P. Wieczorek (German).

Warwick
Lecturers: Dr W. M. Boynon (computer science); Mrs A. E. Cullen, Dr M. J. Rosenthal (history of art); Mr R. F. Cranston, Mr J. M. Elliott, and Mr D. Lowry (school of law); Mr M. Doyle (international studies); Dr K. W. Sivcitt (engineering); Dr E. C. Gallafent (English); Dr S. P. Heywood, Mr M. J. Rippon, and Dr J. Pickering (psychology); Dr R. H. Harrison, Mr P. A. Weller (economics); Dr C. A. MacDonald (history); Mrs E. McLeod (applied social studies); Dr A. O'Hagan (statistics); Dr J. H. Slater (environmental sciences); Dr M. T. Vlad (biological sciences); Mr W. W. Wadge (computer science).

Polytechnics

Northern Ireland
Director of studies and head of school of mechanical and industrial engineering: Dr Donaldson McCloy.

North London
Principal lecturer: Mrs S. P. Lees (applied social studies); A. C. George (media resources unit).
Head of department: P. Tonks (management studies).
Lecturers: Mrs M. P. Connolly (applied social studies); Mrs R. S. Gibson (food science); R. A. Cox; T. M. Evans; J. Thienie (language and literature); Miss F. Tomlinson (management studies).

Colleges

Merton Technical College
Head of the School of Engineering: Mr K. C. Jones.

General
The British Council—Assistant Director-General: Mr B. E. Swingler (administration) succeeds Mr E. N. Gummer, who retired on June 18.
Inner London Education Authority—assistant education officer: Mr F. Clyne (now head of ILEA's Community Education and Careers branch).
The Royal Society—Royal Society visiting professorship to Malaysia: Professor L. J. Peterson (department of botany, University of London, Westfield College).
Scottish Council for Research in Education: Chairman: Mr. W. Ross, MP, Secretary of State for Scotland.

Grants

Birmingham
Chemistry—£12,207 from the SRC for research into polarized photofluorescence excitation spectroscopy under the direction of Dr. J. P. Simons.
Physical metallurgy and science of materials—£9,264 from the SRC for research into the diffusion and effusion of hydrogen in rare-earth metals, under the direction of Professor A. D. McQuillan.
Microbiology—£6,446 from the MRC for research into the estimation of fungal mycelium in animals under the direction of Dr L. O. White and Dr E. R. Bott.
Institute of Local Government Studies—£87,167 from the Department of the Environment towards the research of management systems and the organization of the new local authorities, under the direction of Professor J. D. Stewart.
Transportation and environmental planning—£6,000 from the Barrow and Geraldine S. Cadbury Trust for research into Resource planning, under the direction of Professor J. Kolbuszewski and Professor N. Borg.
Centre for Urban and Regional Studies—£31,008 from the Department of the Environment, Building Research Establishment, for research into testing methods of monitoring changes in the housing situation at local authority level, under the direction of Professor A. S. Travis.
Virology—£7,724 from the Agricultural Research Council for research on multiplication of multi-component plant viruses, under the direction of Professor P. Wildy.

Bristol
Anatomy—£21,145 from the SRC towards an investigation on neural mechanisms of the architectural structure of hypothalmic neuroendocrine cells by dye injection; £13,374 from the SRC towards an investigation on neural mechanisms of attentive behaviour and learning.
Biochemistry—£26,853 from the SRC for continued research on the mechanism ATPase mechanism, a study of dynamic processes of muscular contraction; £12,770 from the MRC for research on mechanism of inhibition of growth hormone release by somatostatin, effects on calcium and cyclic AMP metabolism; £2,345 (supplementary) from the SRC towards research on individual steps in the control of calcium activated ATPases' and an extension of the grant by one year to 31 December, 1975.
Physiology—£14,810 from the MRC towards an investigation on experimental myelination of the spinal roots in the dystrophic mouse; £2,800 from the MRC (supplementary) towards an investigation into the firing patterns of cerebellar neurones during locomotion in cats; £5,054 from the MRC towards an investigation on the attempt to identify the afferent and efferent nerve fibres in the carotid body by the study of mutant mice.
Theoretical chemistry—£6,310 from the SRC towards an investigation on valence—bond calculations of potential energy surfaces for simple organic chemical reactions.

Cardiff
Music—£7,500 to Dr Michael F. Robinson from the Trustees of the Leverhulme Foundation for a study of the life and works of the Italian composer Giovanni Paisiello (1740-1816).

Edinburgh
Agricultural biochemistry—£11,609 from the Agricultural Research Council towards an investigation on embryo development in higher plants, under the direction of Dr. Carol Dutfus.
Animal production—£2,000 from the Horning Industry Board in support of an investigation into pig growth trials using liquid fish protein produced from Herring Industry Board in support of Dr J. H. D. Prescott.

Kent
Faculty of Natural Sciences.—Doctors L. T. Little, G. H. Macdonald, D. Nimmo, Matheson and E. S. Parker, £52,774 from the SRC for work in radio-astronomy.
Faculty of Social Sciences.—Dr R. Feleen, £1,939 from the SRC for research on Nuaulu Ethnobiology and Ecology in Seram, Eastern Indonesia.

Newcastle-upon-Tyne
Human genetics—Dr D. P. Roberts, £4,774 (supplementary) from the SRC for research into biological interrelationships in the Tristan population.
Medicine—Professor R. Hall and Dr F. Clark, £2,500 from the North of England Cancer Research Campaign for research into the increase in latent thyroid cancer in thyroglossal cysts.
Orthopaedics and traumatic surgery—Dr C. J. Robinson £9,140 from the Newcastle Area Health Authority (Teaching) for research into bone and calcium metabolism in patients with senile osteoporosis and of the pathophysiological basis of this condition.
Physiology—Dr C. N. A. Trotman and Dr C. J. Robinson—£9,268 from the Royal Society for the purchase of equipment in support of studies of hormone action and release.
Mechanical engineering—Professor L. Maunder—£7,000 from the SRC for investigations of the dynamics of mechanisms.

Oxford
Biochemistry—£125,976 from the SRC in connexion with the construction of a high resolution Fourier Transform spectrometer for NMR at about 460 MEz under the direction of Dr R. L. Williams; Dr I. D. Campbell and Dr D. I. Hoult.
Sheffield
Biochemistry—£19,788 from the Agricultural Research Council for research on glutamine synthetase and glutamate synthetase; £7,430 from the SRC for research into regulatory and catalytic sites of pyridine nucleotide-linked dehydrogenases
Chemistry—£6,950 from the SRC for research into the synthesis of macrocyclic compounds forming complexes with smaller organic molecules.
Geography—£8,361 from the Natural Environmental Research Council for an investigation into the frequency, intensity and synoptic climatology of wind chill.
Sociological studies—£11,431 from the Department of Health and Social Security for research into organizational influences on social workers' and clients' perceptions of social work practice.
Chemical engineering and fuel technology—£6,597 from the Department of the Environment for research into the modelling of the burning and extinction of large pool fires.

York
Physics—£12,284 from the SRC for a study of micro structure and optical homogeneity of evaporated multilayers; £18,600 from the SRC for a study of the development of molecular structure methods and use of Karle Hauptman matrices in X-ray crystallography; £19,194 from the SRC for a study of electron spectroscopy of solids.
Institute of Advanced Architectural Studies—£4,000 from the Department of the Environment as a contribution to the diploma course in conservation studies.
Medieval British art—£1,000 from the Esmee Fairbairn Charitable Trust for the printing, mounting, filming and cataloguing of negative photographs of stained glass.
Sociology—£9,000 from the Health Education Council for a study of the first months of motherhood.

Course news

"Sociology: Recent Developments", a five-day course offered at the Polytechnic of Central London from July 14-18, 1975, is primarily designed for lecturers and teachers to A level or equivalent. Further details and enrolment forms from The Short Course Unit, Polytechnic of Central London, 35 Marylebone Road, London NW1 5LS.

Four law courses organized by the German Academic Exchange Service together with the British Institute of International and Comparative Law will take place at the London School of Economics during July and August, 1975. The courses are: International summer course in modern English law from July 7-August 1, under the direction of Professor M. Schmithoff. International summer course in European community law from July 7-18, under the direction of Professor K. R. Simmonds; London summer course in modern German law from July 7-18, under the direction of Professor H. Kotz. Further details and application forms from The Course Organizer, German Academic Exchange Service, London Branch, 11-15 Arlington Street, London SW1A

"Teaching Philosophy in Relation to the Social Sciences"
a conference which includes papers on:
"Operant Psychology and the Concept of Punishment"
by Professor T. R. Miles
"Personal versus Behaviourist Psychology"
by V. D. Shotter
is to be held at the
University of Leeds 12-14 September, 1975
Further details from:
The Organiser of In-Service Training,
Institute of Education, The University, LEEDS LS2 9JT

Honorary degrees

Universities

Bradford
Honorary degrees will be awarded to the following:
MA: Councillor Mrs D. Birdsall; Mr C. J. Ritchie; M. R. Goodison.
D.Tech: Professor H. Tazieff.
D.Sc: Sir Mortimer Wheeler; Professor F. C. Tompkins.
M.Tech: D. J. B. Copp.
D.Litt: Professor A. J. Brown.

Brunel
Honorary degrees to be awarded to the following:
D. Tech: Mr P. Trier, director of Philips Electronics and Associated Industries; The Rt Hon H. Lever, Chancellor of the Duchy of Lancaster; Professor B. Weedon, professor of organic chemistry at Queen Mary College; Professor F. D. Lewis, executive director of the American Judicature Society.

OU programmes July 5 to 11

Saturday July 5
There are no Open University radio or television programmes on this date.

Sunday July 6
BBC 2
8.55 The nineteenth century novel and its legacy: Words, pictures and the novel (A302: prog 10).
9.45 Historical data and the social sciences: Sources for the study of demography (D301: prog 10).
10.10 Analysis: Defining functions (MST121: prog 10).
10.35 Comparative physiology: Hormones and homeostasis: Osmoregulation and excretion (S322: prog 10).
11.00 Urban development: Policies: Urban life-styles II: the suburban family (D301: prog 10).
11.25 Mechanics and applied calculus: Modelling mechanical vibrations (MST121: prog 10).
11.50 Using libraries: The University Library (prog 02).
12.15 Science foundation course: Sustaining the Summer (S100: prog 18).

RADIO 4 (VHF)
9.10 Instrumentation: Dynamic techniques (T551: prog 06).
9.30 Science and the rise of technology since 1900: Science and the universities (A282: prog 07).
9.50 Microeconomics: The objectives of firms (D302: prog 09).
10.10 Problems of philosophy: Explaining simple terms (A351: prog 13).

RADIO 4 (VHF)
Additional programmes for North Scotland and parts of Wales)
6.05 The history of architecture and design 1890-1930: Hasil Ward on Connell, Ward and Lucas (A305: prog 10).
6.20 International politics and foreign policy: Violence, terrorism and the State (D333: prog 10).
6.40 Digital computation: Communication in a computer system (T281: prog 10).

Monday July 7
There are no television programmes on this date.

RADIO 3 (VHF)
Additional programmes for North Scotland and parts of Wales)
6.00 Making sense of society: Socialization: Differential communities (D101: prog 10).
6.20 Literature and the city: The physical base of the city (Chicago) (D301: prog 10).
6.40 Decision-making in Britain: Report to the Mental Health Service (D301: prog 11).
* repeated programme.

University of Exeter
LANGUAGE CENTRE
A German/English Linguistic Institute ("Seminar in Contrastive Analysis") will be held at Exeter University from 30th July-13th August.
Cost: £60 (residential) (including tuition fees and meals or £12 (non-residential) excluding board.
Further details from:
Dr. R. R. K. Hartmann
Director, Language Centre
University of Exeter
Exeter EX4 4QJ

Canada

Post-compulsory reports go under microscope

from Edward Sheffield

EDMONTON

Recent commissions of inquiry into post-secondary education in four Canadian provinces favour the coordination of universities, community colleges and technical institutes within integrated provincial systems rather than the separate development of each group of institutions. The reports of these commissions stress accessibility for segments of the population not now served, and hence a greater variety of educational programmes.

Under the presidency of Professor Malcolm Taylor of York University the sixth annual conference of the Canadian Society for the Study of Higher Education brought together the chairmen of the four comprehensive provincial inquiries into post-secondary education which have reported since 1970 and a panel of "challengers" to evaluate and critique the reports.

The commission chairmen were Dr Walter Worth, whose report of the Alberta Commission on Educational Planning, *A Choice of Futures*, was published in 1972; Dr Douglas Wright, chairman of the Commission on Post-Secondary Education in Ontario—of which the final report, *The Learning Society*, appeared later in the same year; Michael Oliver, chairman of the Task Force on Post-Secondary Education in Manitoba which reported in 1973; and Professor John Graham, chairman of the Nova Scotia Commission on Education, Public Services and Provincial-Municipal Relations, 1974.

Challengers were Professor Ronald Baker, president of the University of Prince Edward Island; Professor André Coté of Laval University; Professor Gordon Campbell, University of Lethbridge; and Professor John Dennison, University of British Columbia.

Many participants, including the chairmen of the commissions themselves, agreed that such inquiries tended to reflect the social climate of their time and to bring potential changes into focus rather than cause them. Professor Dennison drew attention to the effect of the state of the economy on the moods of the reports—those of Alberta and Ontario exhibiting optimism, that of Manitoba concern, and the Nova Scotia report pessimism.

It was suggested that the earlier reports were innovative and expansionist while the latest document advocated a return to higher education equivalent of the three Rs—with emphasis on selective admissions and "the restoration of standards".

Professor Baker contrasted the Graham report which "begins with history and moves forward" with the Worth report which "begins with the future and rushes happily on".

Noting that Procrustes was the first planner, Professor Baker was critical of the systems approach to planning adapted from the military establishment by higher education bureaucrats, and was concerned about the amount of governmental control invited by the commissions in their reports.

Professor Coté distinguished between what he called the "vertically coordinated system" of post-secondary education of the province of Quebec and the "horizontally coordinated systems" advocated for Alberta, Ontario, Manitoba and Nova Scotia. He warned against "ushering in a learning society in which people no longer know how to learn".

Professor Campbell noted with approval that the Alberta commission had advocated a "combined development model" for the "federation" of universities, colleges and technical institutes into one system. He thought that the Ontario commission would have been wiser to recommend a unitary rather than a binary system of universities and colleges.

In a mood of concern, Professor Dennison asked whether the egalitarian goals of the reports could be attained without the lowering of standards. He pointed to the potential effects on standards of attempts to lessen the stress on credentials, of making admissions more open, of the multiplication of programmes, and of pressing the universities to be more responsive to society's needs.

Responding to the challengers, the commission chairmen reiterated their conviction that the proposed roles of institutions of higher education should be clarified, that there should be renewed emphasis on quality, and that the balance between public and private responsibility in the field should be reassessed.

When the commission chairmen were asked what they would do differently if they were writing their reports now, Dr Oliver said he would argue that equality and excellence were not incompatible. Also, he would advocate consideration of the concepts of "CEGEPs (colléges d'enseignement général et professionnel) of Quebec.

Dr Worth would put forward the provinces' right to share with the federal government in the planning of research, and would stress the interrelationship of manpower planning and educational planning.

Dr Wright expected that because trends had changed, different instruments might be recommended in order that education might serve effectively in the realization of social policy. Professor Graham's report was so recent that he did not attempt an answer to the question.

Krupp grant for modernization study

The Alfred Krupp Foundation of Essen has made a grant of DM 1,000,000 (£200,000) to the International Council for Educational Development (ICED), a private international association concerned with problems of higher education. The announcement of the grant was made by Dr James Perkins, ICED chairman.

The grant was made to support and promote the programme activities of ICED concerned with the modernization of institutions of higher education and the design and management of systems of higher education. A major concern of the organization since it was founded in 1970.

Under this programme ICED has conducted studies of Italian higher education and is now managing a comparative study of problems of access to higher education under a grant from the Volkswagen Foundation. ICED has also conducted seminars on aspects of these problems in Aspen, in conjunction with the Aspen Institute; in Bruges and Stockholm in partnership with the Carnegie Commission and the European Cultural Foundation; and in Williamsburg, Copenhagen, Madrid, and Princeton in connexion with the ICED trustees meetings.

Italy

University building Bill expected in autumn

from Patricia Clough

ROME

Parliament has begun discussing, in the committee stage, a £266m. government Bill to provide new buildings for Italy's chronically overcrowded universities.

The same Bill also earmarks another £23m to complete earlier university building projects which have been held up because funds were insufficient to cover spiralling costs.

One of the most important aspects of the Bill is that it drastically reduces the cumbersome red tape which invariably holds up public building for years.

Previously, plans had to be approved by at least 30 different authorities, a process which would take some three or four years. Under a new procedure, they can be given the go-ahead straight away.

The Bill, at present being reviewed jointly by the Education and Public Works Committees, also includes a £1,333m. school building plan.

If all goes smoothly the Bill, which is not expected to arouse much opposition, should be passed in the next few months.

Eastern Europe

Comecon's Russian difficulty

by I. V. Chak

Two issues of vital concern to the question of future cooperation among the European universities—an objective now seemingly supported by both Eastern and Western Europe, though not always for the same motives—are the East European authorities' well-publicized insistence on government-sponsored membership by institutions rather than by individuals in any new organization of European universities, and the language problem to which virtually no attention has, so far, been paid in the West.

Until now, the East European educational authorities, who did not hesitate to make Russian the compulsory second language in their schools and institutions of higher education, have been in something of a dilemma over recommending to their delegations the use of Russian for official working purposes at East-West meetings and conferences.

This ambivalent attitude has led to a situation among the East European higher education community where a small group are jokingly referred to as the "Western travel-motivated linguists", while the vast majority fall into the category of "envious non-linguists" (those who speak well only their native languages and Russian) and are virtually excluded from East-West official educational contacts.

The main reason for not recommending to their West-bound delegations the use of Russian lies in the almost obsessive preoccupation of the East European authorities with the policy of neutralizing any Western criticism regarding the limited independence of their countries.

As might be expected, the use of English or French for official working purposes in preference to Russian by most East European delegations at East-West meetings and conferences, unaccompanied by evidence of any major revision of their policy of providing constant support to the Soviet Union's major moves in East-West educational cooperation, was bound to prove not only an ineffectual weapon as far as countering the criticism of the Western educational community was concerned, but was also responsible for creating considerable tension at home.

It is becoming increasingly apparent that as the integration process continues to develop, so does the need for a common language among the countries belonging to Comecon, the East European economic community. English and French, two neutral and popular international languages among the East Europeans, are not native to any member state of Comecon and a good active working knowledge of them is limited to a small number of East European academics.

So it is not surprising to find that Eastern Europe, which has only one international language, Russian, and a considerable number of minority languages (most of them Slavonic) is quietly but persistently promoting Russian as a common language.

The implications of this situation for the future development of pan-European educational cooperation are clear. If growing numbers of delegates from the Comecon countries are to participate, more fully and communicate more effectively at East-West meetings and conferences, they cannot afford to refrain much longer from using Russian.

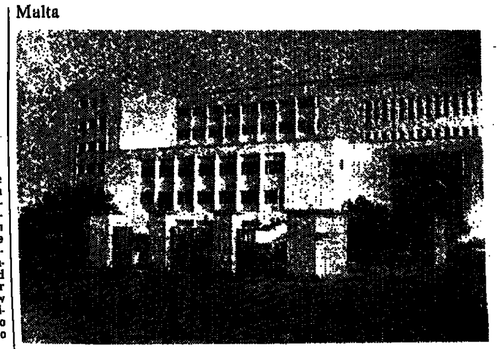
A first significant step in this direction has now been made. The Comecon countries (except Romania) have recently agreed that in any future East-West educational discussions affecting Comecon as a whole, there should not only be a common stand but Russian, "the language of socialist integration", should be officially used by the delegations of the member states and the content of these discussions recorded in Russian in order to facilitate joint consultations.

Mexico

£12m for rural science

The National University of Mexico has earmarked a new high of 350m. pesos (£12m) for scientific research aimed especially for further industrial and agricultural development, with rural areas receiving special attention.

Malta



Malta: College of Arts, Science and Technology

Mintoff goes ahead with centralization

from Carl Sievin

VALLETTA

The government is proposing to unify all higher education under the control of the Commission for the Development of Higher Education, set up by the Maltese Education Act, 1974. This involves changes in the status of the Malta College of Arts, Science and Technology and that of the Malta College of Education.

The commission includes representatives of the government, trades unions and employers, the heads of the Royal University of Malta, MCAST and the College of Education, and a number of Maltese and British academics.

At the moment, MCAST operates courses in three main areas, engineering, business studies and tourism, along with service departments for English, mathematics and other basic subjects. Its only degree courses are in electrical and mechanical engineering, which lead to the BSc(Eng) degree awarded by the university.

Apart from these, it provides courses leading to City and Guilds diplomas in engineering and catering, various secretarial and accountancy courses preparing for British and Maltese qualifications, and a range of architecture, hotel administration, catering, business management and clerical studies for which it awards its own diplomas and certificates.

The Malta College of Education was formed by the amalgamation in 1972 of two single sex colleges which were then controlled by religious orders. The women's college, owned by the sisters of St Joseph, worked on a contract basis with the government, training teachers in return for a per capita grant. The men's college was much less independent, owned by the government which also recruited lay staff, but administered by the de la Salle brothers on a salaried basis.

The unified college is now a secular institution with staff recruited from Maltese secondary teachers on secondment, and no permanent appointments. The former monastic staff have completely vanished apart, it is said, from the brother of Mr Dom Mintoff, the Prime Minister.

The government's intention is to move the college of education from its own building into that of MCAST and reconstitute it as the department of education of the university. As things are, MCAST is unable to make full use of its magnificent building (well above British standards for most polytechnics and new universities) which was provided by Unesco funds in 1963. So there is plenty of room for the college of education which will free its present building for other uses.

It is believed that some changes detrimental to the status of MCAST were first proposed at a meeting of the commission in April. Apparently the plan was to remove the degree level teaching from MCAST and effectively dissolve the college into three technical institutes, one for each of the three main areas of study, to continue with the other levels.

Students who would have taken an engineering degree at MCAST would have had to seek entry to the university instead. After a stormy debate, the commission failed to agree. Nothing more can be done until its next meeting in 1976, and it seems that these particular proposals have now been dropped.

The integration of the college of education into the university is seen as a continuation of the government's policy of centralizing higher education and assuming direct control of it. Last year's Education Act effectively applied this to the previously autonomous university and present policies will put teacher training in the same position.

The government has, however, made some concessions to the college of education. It was originally proposed that it would be placed under the Faculty of Arts without its own chair. Now the plan is to make it a full department in its own right, with a chair of education.

India

UGC urges fresh approach to assessment

from A. S. Abraham

BOMBAY

The University Grants Commission has proposed a modification of the system of "internal assessment" in Indian universities to provide for the revaluation of a student's answer scripts if he thinks his work has not been fairly assessed.

The proposal is made in a report published by the UGC and is based on a study of the system undertaken at "zonal workshops" held in four cities, one each in eastern, western, northern and southern India.

Internal assessment is designed, according to the UGC, to test the performance of students "continuously throughout the term or semester" so that it "leads to improvement in the contents of courses, methods of teaching and the teaching-learning process in general. It is also intended to encourage students to apply themselves to their studies throughout the year instead of concentrating their efforts towards the end of the session."

The essence of the system is the evaluation of a student's work by his teacher(s). Inevitably, it is a subjective mode of assessment. In practice, however, "there (are) possibilities of individual institutions misusing it to overestimate their students to outshine other institutions, and of unscrupulous teachers favouring or victimizing particular students". Such "misuse" has created "some difficulty" in working the system.

To quote the UGC: "The suggested measures include putting the grades or marks on the notice board immediately after evaluation so that a student knows where he stands in relation to others, returning the script to the student and discussing with him the grade awarded.

"If a student is still dissatisfied, he may be allowed to appeal to the relevant authorities. It is for (them) to decide what action to take—a re-examination of the script by the same or another teacher or an oral examination based on the script or a fresh assignment."

Black colleges hit by success of integration

from Angela Stent

CAMBRIDGE, MASS

America's 120 Black colleges are facing a crisis which is the result of a paradoxical set of circumstances. The success of the integration movement in the 1960s has diminished their importance, and whereas predominantly White colleges have special minority recruiting programmes, Afro-American curricula and special offices to find good jobs for Blacks once they graduate, the traditional Black colleges offer none of these services because being Black is nothing special there.

In recent weeks, however, several Black colleges have announced that, despite the financial crunch, they intend to stay in business, and have begun widely publicized fund drives to reassert their viability.

One Black institution which has pioneered the fund drive is Miles College. At the height of the Civil Rights Movement, Miles College, in Birmingham, Alabama, was in the forefront of the integration drive. Founded 70 years ago by a Black branch of the Methodist Church, it has 1,250 students and is a coeducational liberal arts college.

It is currently suffering from the recession and the aftermath of its prominence in the 1960s, when the embittered White community refused to donate money as they had before.

Now, however, local White groups have agreed to help in the fund drive: the Birmingham business community is spearheading the campaign to raise $14m so that Miles College can move to new quarters and expand. The fund drive is particularly important since it signifies the renewal of an old alliance between the White and Black communities in Birmingham.

Whereas Miles caters mainly for the disadvantaged Black student, Spelman College, nicknamed the Vassar of the south, has traditionally educated the daughters of the nation's most prominent Black families.

Situated in a suburb of Atlanta, Georgia, it was founded in 1881 by Baptists, and is one of the country's two remaining Black women's colleges (the other is Bennett College in Greensboro, North Carolina). It has a student body of 1,100 and is a liberal arts college.

Spelman faces a $100,000 deficit for the academic year that has just ended, and a decline in applications. It has become a victim of its own successful fight for social change. Many of its potential students have been lured away by prestigious White colleges that once would not have accepted them.

Spelman's $17m fund drive is directed towards improving its curriculum, and attracting better faculty. It is fitting in that it has close historical links to the Rockefeller family, which has always been one of its mainstays of support.

Now under a Black administration for the first time, Spelman is trying to present itself as a bona fide Black institution which is relevant to the concerns of present-day Blacks, rather than a White-run finishing school for the daughters of the Black elite.

Gallup poll shows student trend to radicalism

A Gallup poll on how the attitudes of college students change from their freshman to senior years has found that "the lack of knowledge and understanding of the free enterprise system is widespread".

As a result of more than 1,000 personal interviews with college students on 57 campuses, the poll discovered that "college students move sharply to the left as they advance from freshmen to senior". Most of them vote Democrat.

By a margin of two-to-one, college students are in favour of the government placing stricter controls on business, and advocate the splitting up of big corporations into smaller ones. They also support stricter controls of trade unions.

California demand for teacher training drops

In a period where teachers are finding it increasingly difficult to get jobs, enrolment in teacher training courses has declined at the University of California but risen slightly in the State University and Colleges system, according to a UC study.

The study shows that in 1972-73 there were 1,900 students preparing for a teaching credential at UC. This year the figure dropped to 1,500.

In the State University system 11,157 students were working for a teaching credential in 1972-73 compared with 11,196 in 1973-74.

The National Education Association estimated last year that only 111,000 of the 234,000 who received teaching credentials from universities and colleges were able to find jobs.

Affirmative action 'defaulters' face withdrawal of funds

As the debate over affirmative action and government bureaucratic inefficiency continues, the Department of Health, Education and Welfare (HEW) has warned 29 colleges that they face a possible loss of more than $65m in federal contracts if their hiring and promotion plans do not meet affirmative actions standards before June 30.

HEW's Office of Civil Rights has already told eight universities that their affirmative action programmes — which stipulate goals and timetables for the recruitment, hiring and promotion of women and minorities — are unacceptable and they plan to send similar rejection notices to five more.

In addition, HEW says that it does not have enough time to evaluate the programmes of 16 other colleges before the end of the fiscal year on June 30—but they may not fall within the guidelines. The 16 include Harvard, Yale, Princeton, the University of Chicago and George Washington University.

The contracts for the 29 colleges are from six agencies, ranging from the National Cancer Institute to the Navy Department. In the past, more than $30m have been temporarily withheld from institutions which have failed to comply with affirmative action guidelines. The Office of Civil Rights is required to review all affirmative action plans whenever contracts exceed $1m under an executive order which has been the target of bitter disputes.

Part of the problem is the bureaucratic procedures that do not give the agencies enough time to review affirmative action plans. Mr. Peter Holmes, director of the Office of Civil Rights, blames government agencies for not giving his office enough time to evaluate the colleges' plans after they had been awarded government contracts.

Pending a final decision on the affirmative action plans of the 16 colleges, HEW has notified them that they must either sign model affirmative action agreements or risk possible rejection of their existing targets and the withholding of contract money.

The affirmative action programme is controversial for two main reasons. On the one hand, most colleges have complained about the vast quantities of information that must be submitted to HEW in order to qualify for government funds and also about the ambiguous nature of some of the guidelines. On the other hand, some professors complain that affirmative action plans may be more qualified than the candidates who are given jobs. Women's groups, however, counter that affirmative action has not gone far enough and that women are still excluded from top faculty posts.

Republic of Ireland



Trinity: bridge-building or pre-emptive strike?

Trinity bids to retain engineering power base with new degree deal

from Peppy Barlow

DUBLIN

Trinity College Dublin has become the first Irish university to set up a formal degree-awarding relationship with the technical sector since Mr Richard Burke, Minister for Education, announced his plans for the reorganization of higher education in December.

In doing this TCD has broken the unofficial embargo being practised by other university institutions which have so far been reluctant to take on the validating functions envisaged for them by the Minister.

It also seems to have set the trend for the National Institute for Higher Education (Dublin), which is to be comprised of the Dublin technological colleges, to become a recognized college of TCD.

Responding to a request from the Dublin City Vocational Education Committee, the Board of TCD has agreed that students graduating from the engineering courses in Kevin Street and Bolton Street Colleges of Technology at College Diploma level shall be awarded a university BSc from this year. Two courses are involved—the electrical engineering course at Bolton Street and production engineering at Kevin Street.

These diploma courses have been recognized as qualifying students for postgraduate work in TCD for the past six years, and there has been considerable cooperation among the institutions in the form of sharing equipment and teaching expertise. In some sense, therefore, the awarding of degrees can simply be seen as an extension of this less formal form of recognition.

Both TCD and Dublin City VEC recognize that the present arrangement between them can only be temporary, pending the decision of the Governing Body of the new NIHE (Dublin) which has not yet met. But it seems likely that this will present some real problems as the VEC, which put the proposal forward, and the two principals of the colleges involved, who have both welcomed the TCD move, are represented on the new Governing Body.

Whatever the sequence of events it is clear that Trinity has a special interest—namely to draw back some of their engineering function which the Minister's proposals seemed to cast into limbo when he said that the main development in engineering science would be in University College Dublin and that TCD would receive no further money for capital development.

The motive may be fairly straightforward, the effects are not. To begin with it implies a natural progression towards the Dublin NIHE becoming a recognized college of TCD rather than UCD, a development which is bound to set the other university establishment wondering about the wisdom of refusing the validating function.

Opinion has already been expressed in National University circles that Trinity has stolen a march on them and it is understood that UCD has made unofficial approaches to another Dublin city college, the College of Commerce in Rathmines.

It would also seem to pre-empt the development of either NIHE (Dublin) or the NIHE (Limerick) as an independent university institution in the forseeable future, a situation which will not be kindly regarded in Limerick. In the Minister's proposals there was a let-out clause which said that the NIHEs could become independent if at any time the universities to which they were affiliated seemed to threaten their traditions. The refusal of the universities to validate might have had just such an effect.

Much more important, however, is the fact that the situation may yet again retard the development of the National Council for Educational Awards (similar to the British CNAA) which has made up a significant amount of ground since the Minister stripped it of its degree-awarding function. Because of university reluctance to validate the NCEA has been given an interim role in the awarding of degrees and has actually validated the first degree courses in the National College of Physical Education.

Even more central to the issue is the need to coordinate courses at third level. In this context the NCEA had drawn up proposals for developing a validating procedure in which the Council would work in conjunction with the universities. While the TCD move does not entirely eradicate this option it sets up an alternative pattern which may undermine it. And this, in its turn, brings up the whole question of coordination.

For, while the Dublin colleges have a unique role in catering for a very wide range of courses and will presumably ensure coordination within their own institution, the TCD arrangement does not seem to carry any inherent form of coordination with lower level courses. This will be of great concern to those who are worried about the subordinate position of the Regional Technical Colleges.

Academics are 'historically left-wing'

from Frances Hill

NEW YORK

American academics throughout the twentieth century have been predominantly committed to progressive, liberal or leftist politics, according to a study by Everett Carl Ladd and Seymour Martin Lipset, sponsored by the Carnegie Commission on Higher Education. The authors attribute this to the lack of a legitimate national conservative tradition.

The most successful, high-achieving, amply-rewarding faculty have the greatest inclination to support a politics of social criticism, the authors say. They also find a sharp differentiation of political view by professional field. "There is a rather neat progression from the most left of centre to the most conservative running from the social sciences to the humanities, law and fine arts, through the physical and biological sciences, education and medicine on to business, engineering, nursing and home economics, and finally to agriculture."

Two-thirds of the faculty surveyed in the social sciences approved of "the rise of student activism" as opposed to one-fifth in agriculture. Professors Ladd and Lipset attribute this variation to the different sorts of subject matter and working conditions in different fields.

The authors analyse the ebb and flow of faculty activism, showing that periods of intense politicization and criticism tend to alternate with periods of retreat "into the ivory tower". At the height of the Vietnam war large numbers of students, supported by many faculty, were involved in massive demonstrations. "Sharp conflict among academics characterized campus life . . . Class rooms became political arenas." Half a decade later the period of activism was over.

"This change should not come as much of a surprise to those with any sense of history." The protest of the early nineteenth century, the radical student activism of the pre-World War I decade and the era of the Great Depression were all followed by periods of moderate to low levels of campus protests, the authors say.

The Divided Academy. Professors and Politics. By Everett Carl Ladd, Jr. and Seymour Martin Lipset. Sponsored by the Carnegie Commission on Higher Education. McGraw-Hill. $17.50.

New York cuts its own losses

To prevent one-sided budget cutting by the state executive and legislature and to avoid interference in academic matters by the state Board of Regents, the State University of New York will itself appraise its academic and fiscal policies during the coming year.

Aid to resist Mayor Beame's suggestion of specific areas in which the City University of New York's budget might be decreased, the Board of Higher Education, arguing that it alone should determine how its available resources should be spent, has devised its own austerity budget.

Both announcements reflect efforts by higher education systems to block incursions from state authorities by doing their own evaluations and pruning. SUNY has said that a study by a commission of administrators, faculty and students will assess the quality and feasibility of all academic programmes, study the efficiency of administrative and non-instructional personnel and policy, discuss changes in the student fee structure, and try to enlarge decision-making flexibility. It has been pointed out that universities engage constantly in this exercise, but power and jurisdiction concerns seems to have produced this one.

The tactic of doing your own blood-letting to avoid having someone do it for you seems useless to concerned faculty: a few unjust injustices may be forestalled. But demotion to shore decreases in budget appears to faculty governance bodies to subvert the continuing struggle to persuade the public to spend more than the present 2½ per cent of the gross national product on post-compulsory education.

New Zealand

Extra-mural students double to 4,000

from Brian Priestley

CHRISTCHURCH

The number of extra-mural students at Massey University has doubled in the past five years from 2,000 to 4,000. Extra-mural courses are a Massey speciality, and attract students from all over New Zealand.

A computer survey has shown that 55 per cent of the students are women, and 48 per cent of them are aged from 20 to 29. By occupation 47 per cent are teachers or student teachers, 16 per cent are housewives, and 20 per cent are employed by the government or local bodies.

Only a third of the students live in New Zealand's four largest population centres—extra-mural courses are most popular among country people. Just over a quarter of the students live in provincial towns, and 38 per cent of them live in the countryside.

Australia

Commission urges major cutbacks in universities

from John Kirkaldy

SYDNEY

The report of the Universities Commission may prove to be one of the most controversial documents in recent Australian education: it recommends the cancellation of three proposed universities and the cutting back of expenditure to $A1,781m (£1,047m).

The report, which sets out guidelines and priorities for universities in the next three years, is in stark contrast to the recent reports of the commissions on schools and advanced education, which urge increases in government spending of up to 60 per cent. Although the Universities Commission is only an advisory body, there seems every indication that Parliament will approve most of its suggestions.

The report predicts that the percentage of the 17-22-year-old age group participating in advanced education will rise from 17.2 per cent in 1975 to about 23 per cent in 1990. But it provides for university numbers to rise by only 16,900 (13.8 per cent) from 149,600 in 1975 to 166,300 in 1978.

The report recommends the founding of only one new university in the next three years: this will be the Deakin University at Geelong in Victoria.

This will have 3,200 students by 1979 and will have substantial residential accommodation to take the overflow of Melbourne's three existing universities.

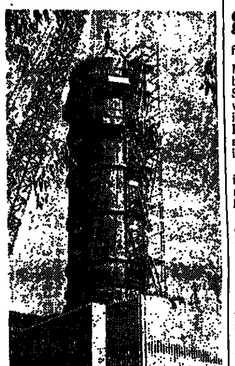
The three proposed universities that the report does not wish to be allowed to start in the next three years, despite state approval, are Albury-Wodonga (NSW-Victoria), Macarthur University at Campbelltown (NSW) and a second university in Canberra (ACT).

The Albury-Wodonga University has been agreed to by both states concerned and the federal government. The recent Karmel report on the possibility of an Open University in Australia recommended that this university should have a crucial role in the future and it was an important factor in their decision not to recommend an Open University in the forseeable future, a situation which will not be kindly regarded in Limerick. In the Minister's proposals there was a let-out clause which said that the NIHEs could become independent if at any time the universities to which they were affiliated seemed to threaten their traditions. The refusal of the universities to validate might have had just such an effect.

Much more important, however, is the fact that the situation may yet again retard the development of the National Council for Educational Awards (similar to the British CNAA) which has made up a significant amount of ground since the Minister stripped it of its degree-awarding function. Because of university reluctance to validate the NCEA has been given an interim role in the awarding of degrees and has actually validated the first degree courses in the National College of Physical Education.

Even more central to the issue is the need to coordinate courses at third level. In this context the NCEA had drawn up proposals for developing a validating procedure in which the Council would work in conjunction with the universities. While the TCD move does not entirely eradicate this option it sets up an alternative pattern which may undermine it. And this, in its turn, brings up the whole question of coordination.

For, while the Dublin colleges have a unique role in catering for a very wide range of courses and will presumably ensure coordination within their own institution, the TCD arrangement does not seem to carry any inherent form of coordination with lower level courses. This will be of great concern to those who are worried about the subordinate position of the Regional Technical Colleges.



School of Nuclear Physics at Canberra's Australian National University: the report comes out against a second university for the city.

should increase its numbers from 6,000 in 1976 to about 7,000 in the 1980s.

There are a few areas in which the report suggests expansion. It recommends that many medical and dental schools should have increased grants and two new medical schools should be established at Newcastle University (NSW) and James Cook University at Townsville (Queensland). The programme includes A$21,200,000 for new buildings at them. The recent Karmel report on the possibility of an Open University in Australia recommended that this university should have a crucial role in the future and it was an important factor in their decision not to recommend an Open University in the forseeable future, a situation which will not be kindly regarded in Limerick. In the Minister's proposals there was a let-out clause which said that the NIHEs could become independent if at any time the universities to which they were affiliated seemed to threaten their traditions. The refusal of the universities to validate might have had just such an effect.

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South Africa

Christian movement accused of 'Marxist bent'

from Louis Hotz

JOHANNESBURG

In its sixth and final report the Le Grange (formerly Schlebusch) Commission has fired a parting broadside at the University Christian Movement, one of the four organizations, including the National Union of South African Students, whose activities the commission has been investigating over the past three years.

The UCM voluntarily disbanded itself shortly after the commission was appointed and most of its office-bearers have left the country.

The commission's report, signed by all its 10 members of Parliament, said it would serve no practical purpose to make any recommendations in the circumstances.

Nevertheless, it was felt that, in the public interest, the aims and activities of the movement should be "exposed" as well as its associations with other organizations at home and abroad which were allegedly seeking to undermine and overthrow the existing order in South Africa.

Describing the UCM as neither a Christian nor a university movement, the commission report gave a detailed account of "wild parties" and multiracial "orgies" sponsored by the UCM at which Whites were said to have "debased" themselves "in the mistaken belief that this would impress the Non-Whites".

The commission said that "to all intents and purposes" the UCM was a member of the World Students Christian Federation which, the report declared, had a Marxist bent or sought accommodation with Marxists.

According to the report, the UCM introduced the concept of "Black Power" into South Africa about seven years ago as a political strategy aimed at a confrontation between Black and White. The commission saw the organization as an instrument for training students of Black and White South Africans to work for radical change in the country through revolution.

The commission emphasized that the UCM obtained most of its funds from foreign sources. In South Africa it had originally received support from various churches. In the expectation that the movement would exert a Christian influence on the campuses, but support was later withdrawn.

France

Students get major new grants deal

from George Morgan

NICE

More and bigger grants have been announced by M Jean-Pierre Soisson, Secretary of State for Universities, as part of a package deal intended to relieve hardship among less fortunate students and to ensure a fairer distribution of state funds in the field of student welfare.

From October all grants will be increased by 603frs (£67). This means increases of up to 25 per cent for smaller grants and of at least 10 per cent for bigger post-graduate awards. State grants will now range from £341 to £775. In all, the smallest state awards have been increased by 57 per cent since M Soisson came to office in June last year.

In addition, 3,000 new grants are to be awarded. This will bring the total number of grants in France to almost 121,000. One student in six will benefit from direct state assistance. Half the new awards are to be made to third-cycle doctorate students. Special grants will also be made available in the experimental teacher training centres due to open in six different universities later this year.

In contrast, M Soisson has decided to reduce the number of posts available for entry to IPES, the *Institut Pedagogique de l'Enseignment Superieur*, from 3,800 to 2,400. Under this scheme students who successfully pass the competitive exam in their first or second year at university are given a substantial salary as trainee teachers and are exempted from the written part of the CAPES recruitment exam for secondary teachers. In exchange, students commit themselves to teaching for at least 10 years.

Unexpectedly, M Soisson has decided to increase the state subsidy to university residencies from 13 Frs to 36 Frs a month and per room. At the same time he has "unfrozen" *cité universitaire* rents while promising that increases will not eat up the benefits of the additional state award. In practice, this means that the better-off students with no grants will pay substantially more for their accommodation while the poorer students living on a grant will have slightly more cash to spare.

A special department with responsibility for student welfare has also been set up within the central ministry. It will deal principally with problems relating to medical facilities, housing, and sports and cultural amenities.

Minister turns down selection

Plans to reorganize the French primary and secondary system have gone one step further as the Bill presented by M René Haby, Education Minister, has been approved by the National Assembly.

The revised and much simplified text gave rise to hostile criticism during the often-heated three-day debate. Opposition members, following the line already adopted by teachers' organizations and trade unions, attacked the Bill's lack of substance and vague wording. Passing it in its present form amounted to giving the Minister an open cheque, said one deputy.

Much of the detail of reform, including plans for teacher training and university entry, will be published later in the form of decrees and Ministerial orders.

In the course of the debate M Jean-Pierre Soisson, Secretary of State for Universities, outlined future arrangements in his field. There was to be no policy of selection, he said. A few universities would be authorized to raise requirements in specific subjects but no student with the minimum qualifications would be refused admission to higher education.

M Soisson is relying on a policy of subject orientation in the final year at *lycée* to avoid the current massive drop-out rate in the early stages of university studies. In future, *licènes* will be required to choose one of four basic options—art and literature, economics, science and law. Successful *bachelliers* will then go on to the corresponding area of higher education.

Sweden

U68 goes through after seven years of controversy

from Mike Duckenfield

STOCKHOLM

The U68 and adult education reforms presented to Parliament three months ago (*THES* March 14 and April 11) have been approved with only minor modifications immediately prior to the start of the four and a half month summer recess.

The U68 Act, which has been seven years in the realization, follows modified proposals which came out of a special parliamentary review which assessed university and student opinion on the original report last year.

The hottest points of contention in the reforms have been the plan to restrict the numbers entering higher education, gearing available places to labour market needs, and the creation of six regional boards, one based around each university, which will have the power to coordinate resources between the universities, colleges of education, technical institutions and vocational and professional colleges.

Shortly before the vote parliamentary opponents of restricted entry switched their attention to the idea of an Open University based on the British model as a way of catering for individual demand for higher education rather than fixing the supply according to society's needs.

Apart from the controversy regarding U68 still remains, however, as the government has yet to propose the means of selecting members for the regional boards which will also be responsible for distributing funds for local and special courses and overseeing research activities in their areas.

The Act provides for roughly two-thirds of the boards' members to be representatives of public interests against one-third recruited from within higher education. Part of the opposition by the three smallest parties in the Riksdag was based on the fear that the more numerous Social Democrats and the trade unions would gain greater influence over educational planning by becoming the major grouping on the boards.

One central and six regional organizing committees have been set up to implement the reforms, the main part of which is expected to be put into effect as from July 1, 1977. A new Office of Universities and Colleges, which will succeed the present University Chancellors Office as the central planning body for higher education, is due to start work not later than October 1 this year.

A lottery had to be used to break the deadlock between the socialist and non-socialist groups in the Riksdag following voting on the crucial clause of the adult education reforms which would give trade unions a five to four majority on the local boards distributing the new study subsidies.

The government, backed this time by the Communists, however, won the day in what was only one of 42 lotteries necessary during the last parliamentary session. The Opposition had favoured giving the power to hand out the subsidies to the existing 10 adult educational associations.

The local boards, one for each of Sweden's 24 counties, will now consist of three representatives of the Confederation of Trade Unions, which mainly covers blue-collar workers in heavy industry, two representatives of the salaried staffs union and four county or municipal councillors.

Apart from the new boards, the adult reforms include the subsidising of trade unions to go out and canvass tuition on the shop floor and to improve tuition prospects for disadvantaged minorities including immigrants, the handicapped and those living in underpopulated areas.

The provisional cost of the reforms during the first six months of 1976 alone is likely to be about 112m Skr (£12.5m) to be found partly by the government and those seeking tuition and partly by employers who will have to pay a small percentage of their annual wage bill into a special adult education fund.

The major element in the costs will be a new grant and loan facilities for those taking time off work to study.

Mr Thorvil Zachrisson, Education Minister, faced with mounting opposition to the trade unions' new role, told Parliament that the unions were in the ideal position to help in the active recruitment policy of attracting the least educated to take study leave by overcoming the resistance to education among their workmates.

West Germany

Student health insurance for all to be compulsory

by Günther Kloss

From September health insurance for West Germany's 800,000 students will for the first time be regulated by law. The Bill introducing a unified system of student health insurance was recently passed by the *Bundestag* and is expected to receive the second chamber's approval shortly.

There is no all-embracing national health service in West Germany and the existing scheme, like those for old age pensions or unemployment, is insurance-based, with employer and employee paying roughly equal contributions. It is administered by over 1,700 approved autonomous *Krankenkassen* (sickness funds) and an estimated 89 per cent of the country's population take part. About 10 per cent are privately insured.

At present more than half of all students belong automatically as dependent members of families to the state-guaranteed social health insurance. The remainder, however, were left to make their own arrangements. In many universities the student unions offer or run their own schemes to which all students registered at that university, whether insured elsewhere or not, have to contribute. These schemes were generally regarded as expensive and the benefits provided were frequently rather poor. Forty thousand students are members of the German Student Health Provident Association which has failed and is to be wound up by the end of September.

It was the perilous state of this association, which forced the federal government to act. However the purpose of the new legislation is much more than a mere rescue operation. It is intended to bring some order into the totally confused state of sickness insurance for students. The new Bill seeks to integrate students in higher education, who now number well over 1 per cent of the country's population, into the existing system of public and private insurance funds.

It therefore does not create any facilities designed specifically for student needs and existing student health services including, for example, psycho-therapeutical units at some universities will lose their financial basis and may have to close.

In principle all full-time German and foreign students registered at a German institution of higher education must become members of the *Krankenkassen* of their home town and are obliged to pay contributions in advance for the whole semester. This was one of the controversial points of the Bill. The government originally intended to saddle the universities with collecting their students' contributions. These would then have had to be transferred to hundreds of different funds all over the country.

Monthly contributions have been fixed at 5 per cent of the maximum monthly student grant payable under the Federal Education Grant Act. At present amounts to DM 25 (£5). Students in receipt of a grant receive a monthly subsidy of DM 10 so that their own monthly contribution is reduced to DM 15.

The whole scheme is additionally being subsidized to the tune of DM 15 a month per student which will cost the government DM 65m during 1976. Altogether the financial obligations for 1976 arising from the new students health insurance are calculated to be in the order of DM 75m. Virtually all of it will be borne by the central government.

TIMES PAST — THE TIMES

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Facts before the rout

College of education staff could be forgiven for thinking that the Government's attitude towards their future has taken a more Machiavellian turn in the past few months.

Over the past two years they have had to face an increasingly insecure future without being given many of the pertinent facts on a rapidly deteriorating situation. The cuts in teacher training, which started as a manageable reduction that could be absorbed into new developments in the liberal arts and sciences, now look like turning into a rout with little of the money available to start the new courses which should have saved most of the 11,000 jobs in the 155 teacher training institutions. At the latest count 2,450 could disappear by 1981.

The bizarre combination of a grave economic crisis and a rapidly falling birthrate has obviously exacerbated the situation, but the consequences of reorganization appear to be consistently played down by the Government.

At the latest count it appears that the number of college closures, instead of being confined to a mere eight, is now rapidly rising to between 30 and 45, nearly a third of the original institutions. If the Government does now state publicly, as it has indicated privately, that in-service and induction training is threatened this will add to the problems of the colleges.

What is clear is that the Government is being remarkably coy about the inevitable outcome of its policy which could leave large areas of the country with only limited access to teacher training facilities. In spite of considerable private pressure by college leaders the Government has steadfastly refused to announce a list of the proposed closures, preferring to announce its decisions individually in a random and piecemeal fashion.

The result is that the already dispirited lecturers are finding that their faith in a democratic solution to their future is being steadily shattered. The latest closures mooted by the Department of Education and Science at Darlington and Coloma College, West Wickham, illustrate this point.

Both colleges had already been given a strong indication by the department that they had a secure future. In the case of Coloma College, the staff had even the assurances of a senior civil servant that their college, provided it was prepared to develop its academic links with Croydon College of Design and Technology, should be able to continue until the 1980s.

Suddenly the staff are informed that as the result of a private meeting between the DES and the Catholic Education Council their college had been given a DES-suggested "nil intake" for 1976. The proposals are unexpectedly presented to the governing body at a meeting to discuss other developments and become a *fait accompli* before staff can even be properly consulted.

Darlington College of Education, whose fate is still in the balance, received its proposals for closure in the post after receiving previous DES letters outlining a secure future with Darlington College of Technology.

More recently there have been disturbing signs that few institutions are really "safe" in spite of previous assurances. The Government's decision to refer back the future of Hereford College of Education to the local authority, while welcome as an exercise in local democracy, has had the unwelcome effect of putting at risk the futures of Worcester and Shenstone New College.

Similarly, in Huddersfield the unprecedented proposal to close a polytechnic education department at a time when national policy is to wold polytechnic and college developments together has caused confusion and worry.

The whole effect of this piecemeal, contradictory and uncoordinated policy has been to create an atmosphere of uncertainty in an area which lies already suffered a long period of unsettling development. It also suggests that the Government appears to consider expediency above any other criteria.

The Government would be well advised to end this period of uncertainty soon. The effect of continuing this policy will only add to the atmosphere of gloom and doom which has already damaged one of the most cooperative sectors of higher education. A public statement on the future of this sector would do much to restore the reputation of the Civil Service and ministers which can only suffer by the present handling of this delicate issue.

The OU's special case

The Open University will take only 17,000 of the 52,851 potential students who applied for places next year and those lucky enough to win a place will be faced with a rise in course fees which could be as high as 60 per cent. The OU, in short, is faced with a financial crisis, which is in no different from that facing other British institutions of higher education. But there are compelling reasons why the OU is and should be regarded as a special case.

First, the number and constancy of applications for places indicates clearly that the OU is filling a sorely felt gap in the educational shortage. Second, the numbers game is played differently as the OU compared with conventional universities. There, a comparatively modest increase in resources at the centre means that considerably more students can be accommodated without threat to academic standards. Third, and most vital, the university is just beginning to realise what and how it can do best for the public.

Its earlier degree results obtained from a student population weighted towards those who already knew something of study proved that it knew how to produce degree courses of an original nature and high quality. Now, as the statistics provided by the university's Survey Research Department are beginning to show, the children of blue collar workers and blue collar workers themselves constitute an increasingly significant proportion of each year's intake.

These are the people for whom the OU was originally envisaged and are, decreasingly, the students taken in each year lessens their chances of a university education. Furthermore it has not yet been established what effect having to wait for entry has on motivation to take OU courses.

Course fees must inevitably rise although the Government's present suggestion of £40 per course—the cost after all of taxing a car for a year—is probably not excessive; a study should certainly be made, however, of the effect of raising fees on applications. It is more important that the Government should do what it can to protect the OU's intake, for that is where the OU's future development and prospects lie.

The financial difference between 17,000 intake and 20,000 intake is about £250,000. Much of this cost and indeed much of the university's expenses is tied up in postal charges—perhaps the best aid the Government could afford the OU would be to allow it to send its mail OHMS.

LETTERS TO THE EDITOR

AUT and salary negotiations

from Mr Edward Hughes

Sir,—I should indeed be alarmed if those of us involved in negotiating about salaries were not from time to time accused of being incompetents or amateurs, as Dr Heskin implies (*THES*, June 13) of having been out-manoeuvred either by the vice-chancellors or by the DES, of having put in our claim too soon, or too late, or of having submitted a claim which was much too little or much too big.

Such criticisms are fair comment, and sometimes they may turn out to have been justified because in these difficult economic times both the size of a claim and its timing must be matters of judgment. We can only guess, for example, what is going on in Mr Wilson's mind now and what he will decide to do in a month's time. Sometimes we may guess wrongly.

The last Association of University Teachers' Council, however, spent a whole day on salary matters and nothing known to the negotiators was withheld from the discussion. At the end of the long debate the vast majority of council agreed to support the policy which was being recommended by the executive.

I do not think that they would have so voted if they had believed with Dr Heskin that their negotiators were guilty of "duplicity, dishonesty, disloyalty (and) sheer personal greed". I take some comfort from the fact that Dr Heskin is anyway prepared to forgive occasional instances of incompetence on our part.

There is, of course, much general support for his view that salary differentials within the profession should be reduced and, as you know, the matter has been discussed regularly and widely within the association over a number of years. But the real question is not whether differentials should be reduced, but how far they can be reduced without affecting adversely the salary prospects of the profession as a whole. Today's lecturers are tomorrow's professors.

What is undeniable is that in the settlements of the past few years the greatest relative hurt has been suffered by senior academics—which is not the impression one would get from reading Dr Heskin's letter.

However, as the association is now starting a reappraisal of its salary strategy and of the effectiveness of its negotiating machinery. In December the AUT council will be able to decide whether it wishes to modify the policy which it approved a few years ago.

It will be a pity if Dr Heskin does wash his hands of the AUT and so deprives council of his advice and enthusiasm by transferring his allegiance to a body which, whatever its virtues in other areas, has absolutely no standing in the field of university salaries. What we need from Ulster (and elsewhere) are people prepared to work as hard, as ably and as selflessly for the association and the profession as has done the AUT's current president.

Yours sincerely,
EDWARD HUGHES,
Chairman, AUT committee on salaries and grading,
University of Newcastle upon Tyne.

from Dr J. C. McGrath

Sir,—The assertion by Dr K. J. Heskin that the AUT negotiators have pressed very hard for a settlement favourable to senior academics at the expense of their lower paid colleagues is borne out by an examination of the figures. In the original memorandum submitted by AUT to the Universities' Authorities Panel last autumn the minimum point on the lecturer scale for staff with three years' postgraduate experience was £3,162 : this is £284 more than the current arbitration award. The comparable minimum for a senior lecturer was £5,574 : £264 less than the arbitration award. (Threshold payments have been left out in calculating these figures ; if included the effect of the arbitration award is equally reduced for everybody.)

In effect, this means that anyone with a PhD who is initially appointed before he reaches the magic age of 26, and in my experience this includes the majority of young staff, will receive less than the initial claim whereas all senior staff will receive more. This seems at odds with Laurie Sapper's claim that "the amount now awarded is higher than our claim for an adjustment of the statutory increases beginning October 1974" (*THES*, June 6).

If the members of the executive of the AUT are serious in their intention not to discriminate in favour of one section of their membership then they should seek, in negotiating the current cost-of-living increase, to redress the balance. In so doing so they would be following the example of the Scottish schoolteachers who renegotiated their post-Houghton settlement to assist their junior staff at the expense of their better paid seniors.

All I ask in this case is that the AUT executive stop favouring the senior staff at the expense of their lower paid juniors, otherwise they will be acting as recruiting sergeants for the Association of Scientific, Technical and Managerial Staffs.

Yours faithfully,
J. C. McGRATH,
15 Naseby Avenue,
Glasgow, G11 7JQ.

from Professor A. H. Birch

Sir,—As a senior academic, I was quite astonished to see Dr Heskin's allegation that the AUT is dominated by senior academics and favours them over their junior colleagues in salary negotiations. I can only say that I have never noticed this bias and cannot understand why it has not had a more beneficial effect on my standard of living, which has been declining unsteadily since 1966.

I doubt if Dr Heskin has much sympathy for professors' problems. But if one thinks in terms of personal need it is a matter of common experience that the period of greatest financial pressure for most academics occurs not at the beginning of their careers, when they tend to be unmarried or to have working wives, but in their mid-thirties, when they generally have dependent wives and children.

Our career structure can be hard at this stage : It must be particularly galling for a bright lecturer to be told at 33 that he is not old enough for a senior lectureship when he knows that three years later he will be old enough to be eligible for a chair.

If one wants to criticize AUT policies one would be on firmer ground in querying whether the association has given sufficient priority to the problems of people in this age group. It might be argued, for instance, that the claim that senior lecturers should have the same salary scale as readers was contrary to the general interests of the profession, since it seems likely to have the long-term effect of delaying promotion to senior lectureships.

It may well be that the greatest need now is the introduction of an extra grade to provide a more flexible promotion policy, following the polytechnic example of senior lectureships plus principal lectureships.

All the evidence indicates that the profession is moving towards a serious promotion block, and I suggest that measures to ameliorate this (possibly including the creation of titles like associate professor) are much more important than constantly agonizing about the bottom end of the lecturers' scale. If the financial situation improves unexpectedly, the number of people at the bottom end of the scale is in any case going to get smaller.

Yours faithfully,
A. H. BIRCH,
Professor of Political Science,
University of Exeter.

from Mr B. W. Ribbons

Sir,—Dr K. J. Heskin's petulant letter which attacks the president of the AUT and seeks to divide both the university community and the academic profession may not be worthy of a detailed reply, but I would like to say that while Dr Heskin's wry observing finds AUT council dominated by senior academics, my count shows that 72 members were professors, readers and senior lecturers, 110 members were lecturers and the remaining 52 included librarians, administrators and academic staff of rank not known to me.

I know of no reason to suppose that sufficient of the 52 were of senior academic status to confirm Dr Heskin's observations or the observations reported to him. My figures are obtained from the *Commonwealth Universities Yearbook 1974* and the list of members attending AUT council in December, 1974 : the latest available.

Yours faithfully,
B. W. RIBBONS,
Glasgow University.

Committee talk

from Professor Paul Halmos

Sir,—David Martin's opinions are usually congenial (and his bemused photo agreeable), but on this occasion (*THES* June 13) we should, I think, dissent from him. It is a pity, he says, that in the language of committees and memos we hide "I" behind "one" and insincerely paraphrase "I know" into "one has the impression" or dilute "I regard this as outrageous" into "I am not entirely satisfied".

He gives some other examples of civility and conciliatoriness as well and seems to assign their high-mindedness to the category of hypocrisy. In this critical and tough minded age—tough minded especially about claims to virtue—the campaigner for sincerity gives no benefit of the doubt to those who try to be better mannered than they are. Unless the cult of frankness and truthfulness is served by bluntness and, indeed, by gratuitous discourtesy, it is not plausible.

Accordingly, let us always have categorical statements and not hypothetical ones and let truthfulness mingle with rudeness, presumably it will be so much the sturdier for that. The convention which discourages the use of the arrogant imperatives and indicatives and commends self-effacing subjunctives is to be challenged.

At a time when doctrines have all the running, and when liberal academic impartialities and hesitations are regarded as symptoms of a particularly bilious form of corruption, further economy cuts in politic formalities would be most untimely. At a time when we can sometimes not hear ourselves think because of the noise made by the convinced and the righteous, we should welcome the charade in committees and minutes in which we eschew the peremptoriness of saying that "it is wrong", and we should be pleased to have instead the mild tentativeness of "I am not entirely happy about . . ."

The moment "pretence ceases to be stronger than reality"—as Mr Martin puts it—also happens to be the moment when aspiration ceases to be stronger than reality. Unless we get this right the ethos of forthrightness will become the ethos of boorishness. Those in university life today need not trouble to search for evidence for this outside the campus walls. And, of course, David Martin knows this very well indeed.

"With all due respect" to him he was doing a bit of disservice to us in these abrasive times by indulging in idiosyncratic criticism about the few surviving observances of good manners and self restraint. He should commend them.

Yours faithfully,
PAUL HALMOS,
Professor of Sociology,
The Open University.

BOOKS

Steady build up or sudden leap?

How It All Began: Origins of the Modern Economy
by W. W. Rostow
Methuen, £5.90 and £2.90
ISBN 0 416 55920 4 and 55930 1

Walt Whitman Rostow has been in many ways one of the most stimulating of all postwar economic historians. His work on the great cycles in the British economy in the nineteenth century, which was published soon after the end of the war, brought a new dimension of analysis to the subject. *The Stages of Economic Growth* gave it an entirely new language ; subsequent research has cast serious doubt on the validity of the model he created, but economic growth has never been the same discipline since and you cannot say that about many books. Now he has embarked upon a vast study of the evolution of the world economy over the past two centuries and this is the preliminary volume. Rostow's work has always been more noteworthy for ideas than for intensity of research, and if ever there was a subject that called for vision this is it. Sad to say, we get more potted history than arresting thoughts.

The problem in its most general form is—why did the first breakthrough to the modern industrial system take place in western Europe? To this one then adds the complex but less fundamental question—why did it come precisely where and when it did? The best part of the book is the opening chapter where Rostow sets out his questions and establishes in a preliminary way his basic lines of argument. From the early middle ages Europe experienced periods of expansion taking the form mostly of a growth of population, but Malthus was never far away and there were severe setbacks from time to time. He suggests that capital investment in such growth periods was for the most part designed to increase output by the same methods, not by changing production techniques. Technological advances were only sporadic. So per capita income failed to rise fast enough to escape from the population trap. He is not altogether justified in putting the emphasis in this form, though, because in some regions incomes did rise slowly, growth came from the reorganization of production, trade did develop, ports and cities flourished. The point is that at the end of the eighteenth century, before experiencing substantial development, countries like France had per capita incomes much higher than those of many developing countries today. It is not just the burst through that matters but the real if gradual build up over time. Rostow's rather static view of the "traditional society" has always been a much oversimplified one.

To Rostow as to others the main force in the breakthrough has been the systematic, regular and progressive application of science and technology to the production of goods and services and his problem is to show why this replaced the sporadic innovations of the pre-modern world which just lifted the ceiling of output now and then. North and Thomas in *The Rise of the Western World*, a book not exactly popular with the pundits but provocative for all that, put the emphasis differently. They treated inventions as part of the development process induced by other factors and not in themselves the root cause. Well, as long as one is not saying that these inducements were solely economic but were rooted in the state of knowledge of society and its receptiveness to change, then no great difficulty arises. North asserted that population pressure—or more accurately changes in the land/labour ratio—forced institutional changes which above all gave greater protection to property rights and these in turn encouraged greater innovative activity. David Landes, too, has written of the emergence of codes of conduct with regard to property which in the west largely eliminated predatory behaviour, and gave an incentive to investment quite absent in the uncertain climate in eastern Europe for example. He put this down to the ability of those with private wealth derived from trade effectively to curb the excesses of kings.

Strangely enough Rostow ignores this line of thought almost entirely and indeed it is a serious weakness of his book that it has so little to say about the land at all despite the fact that in most parts of Europe at least three-quarters of the people earned their livings by it. In a rueful vein he turns his back on the subject by quoting the old gamesman's ploy: "But it's different in the South". The trouble is that this is not funny. It was different *everywhere* and maybe there lies the key to our problem. There were huge variations not only in technology but in the whole arrangements of the rural social system all derived from the historical past. It is important to remember, for example, that until transport greatly improved, the object of peasant agriculture was almost invariably to produce a sure harvest rather than a large one. Experimentation was rightly considered dangerous and the penalty of failure too great to be acceptable. If we take this line of thought then the problem of how it all began remains difficult but more specific than the more broad generalizations on European history would have us believe. After all, if one looks at Europe in 1914 and picks out those countries that have succeeded in the development race and those that have failed, the latter are invariably those that have not come to grips with the reorganization of rural society. The important link between agriculture and industry, now given the awful name of proto-industrialization, Rostow lets go begging too. The fact is that it was the development of advanced centres of rural industry that provided the jumping-off ground for the exploitation of power technologies later on. Exactly why they did grow up is not clear but their importance is undoubted.

The favourite broad explanation for the primacy of the west lies in emphasizing the relative value placed at different times and places on the rational approach to the manipulation of the human and material environment. The extreme example of course is Max Weber's stress on the role of the Calvinist ethic and in general if not in detail his book still towers over that of most others. Landes followed up work that Weber subsequently did on non-European civilizations and emphasized that the Christian church and Judaism upheld man's aspiration towards mastery of the environment in contrast to the fatalistic or obscurantism of other religions or indeed their positive contempt for material progress.

Trevor Roper's brilliant essay, "Religion, the Reformation and Social Change" said less about the advance of technology and investment than about the shift in the dynamic centre from southern to northern Europe. The centres of European capitalism were strung along the trade route from Flanders to Italy and in the seventeenth century these old growth areas were transplanted to the north largely because of the elements in the Catholic counter-reformation which forced their individualistic entrepreneurs to leave.

This was not only a spiritual matter but also a reaction against the enormous strengthening of the bureaucratic nature of society that had come about. As regards economic change of Landes and Trevor Roper are clearly gradualists. They look to the kind of society in which the pressures of population, of trade, of enterprising merchants are most likely over time to achieve change. From this it is possible to go on to argue that technology steadily advanced too from agricultural reorganization and the skills in shipbuilding and making guns that the northern European powers used so effectively in the sixteenth century till the critical discoveries of the eighteenth century were reached, leading to an explosion of new ideas and of wealth. Such a gradual build up enabled the leading countries to avoid the "high level" trap that Rostow tends to put aside too easily whereby a country finds itself faced and often baulked by having to make large discontinuous leaps in technology if further rises in productivity are to be possible—a problem certainly faced by laggards over the last century and only conquered with external help.

Rostow looks for the starker contrast, exaggerating to my mind the extent of the leap necessary to achieve modern growth. Emphasizing the lack of innovators, he comes to the conclusion that the problem lay in the minds of the rulers of traditional societies who commanded the resources but did not conceive a permanent and regular increase of them as at all possible. The evidence for change in the two centuries to 1800 comes in a long chapter on the politics of modernity and here one experiences an overwhelming sense of disappointment. The former fertile pen is reduced to a series of straightforward accounts from well-known sources of what governments actually did in the mercantilist era. It is only at the end of this chapter (and Rostow escapes from his sources that for a few pages the book becomes brilliantly alive. Here he argues that governments more and more began to sense that military expenses could be covered not only by maximizing revenues but by increasing output and further that more wealth was a legitimate object of state policy for wider welfare purposes, too. He writes of the reactive nationalism caused by frequent threats of war, of nation states anxious to seek out and to accept new methods and policies to fend off enemies. War was costly but as technological advances led to the belief that permanent progress was possible, it helped set in motion policies which helped create the conditions for modern industrial growth. One can only wish that more specific evidence was available to sustain these sweeping claims.

The rest of the book does not take us much further with the big problem beyond the familiar arguments about the links between science and invention in the eighteenth century. Maybe Rostow is right to emphasize the science introduced inventors such as Watt to methods and perceptions they might not otherwise have commanded but surely one must accept Rupert Hall's view that if the innovators of the eighteenth century, who so excelled in transforming ideas into ironmongery, decided to use some fragments of the new scientific theorizing it was they who chose to do so not the force of scientific truth that compelled them. The book then goes on to the well-worn question of why first in Britain and Rostow chooses as his favourite answer our old friends the non-conformists. Nothing wrong with that of course but the figures he quotes showing their undue role among the eighteenth-century entrepreneurs are now widely accepted to be highly inaccurate and in any case prove nothing about their education or their ethics. Maybe for some reason they were disproportionately represented in that group of society from which the businessmen mainly emerged. But choosing among possible reasons in this way is really far less useful than examining the long process of historical development to see what made Britain ripe for these changes in a way that France, for example, was not.

In any case one of the most notable features of the eighteenth-century industrial changes in England was the number of foreigners involved, especially if one includes Scots in that category as so many now seem to wish to be defined. A crucial feature of European development was the striking mobility of people, their ideas and their money. If Luddites stopped you in one place you could nearly always try elsewhere. With so many separate nation states the opportunities for alternative outlets were correspondingly large.

One's high hopes for this book are quite unrealized. Not for the first time an economist getting away from models and generalizations and trying to write history on the broad scale has found himself a prisoner of his secondary sources. The art of wielding them into a meaningful narrative of one's own is a much more difficult than it looks and Rostow fails to make it. Some weeks ago Bernard Levin was asking a not dissimilar question about music. Why did it flower so late? With unwonted modesty he declared that he had no answer. I would not for a moment suggest that Rostow should have done the same thing but his first idea of just an opening essay to his larger survey was better than the course he adopted. Then the challenging ideas would have had the stage to themselves and I guess there would have been more of them had there been no space for the recital of other people's work.

S. B. Saul

The breakdown of traditional farming

Ecology and Change: Rural Modernization in an African Community
by C. Gregory Knight
Academic Press, £7.90
ISBN 0 12 785435 5

There is a story, perhaps apocryphal, about a vigorous, young field officer in Africa determined to bring about improvements in the crop growing of a semi-nomadic community. With his guide he went from place to place addressing public meetings which were always well-attended by knots of seemingly enthusiastic men. It was some time before this young vanguard of change woke up to the fact that only the women performed the heavy duties of cultivation and were away in the fields during the meetings and that, in fact, his guide was simply following his own clan around the circuit of its annual wanderings. Absurd though this tale may appear, it is the humorous face of a serious problem : the generalization which surrounded (and to a large extent, still surrounds) the "development" of traditional farmers and pastoralists. Planning is the science of directed development based on an ability to predict, which requires a clear understanding of its subjects or victims and their way of life.

It is remarkable, therefore, that it is only in the last fifteen or so years that any serious attempt has been made to examine in detail the functioning of traditional systems of production, their essential rationale and the impact of introduced forces of change. This is precisely what this author sets out to do for a community (the Nyika) living in south-west Tanzania. Perhaps because he is a geographer he has taken an integrative standpoint considering the traditional way of life as a functioning system, in which all aspects of life : the physical environment, the social system, the traditional technology and the historical impress are inseparable. It is precisely this failure to take such an approach and to concentrate instead on single aspects of technology, the "economic" constraints and such like which has resulted to a large extent in the past failure of planning and the inadequacy in dealing with rural societies which most attempts at change illustrate to this day.

The author reveals that the Nyika systems of agriculture are based on an impressive knowledge of the potential and limitations of the natural-resource base, a legacy of innovation where beneficial, a solid community spirit, and an essential rationality. All this contrasts with the pejorative view of African farmers typified by colonial Kenya where they were excluded from most of the cash-crop sector. From his researches, the author isolates the various component threads of the traditional systems and the forces of change and constructs a number of basic models which form the foundations for a more sound approach to introduced change and innovation. The analysis also reveals the very considerable dangers in continuing the *status quo*, as his field work reveals the growing environmental pressures resulting from population expansion and the grafting on of a new demand for land to be used in cultivating cash-crops. These forces are leading to a rapid breakdown of the traditional systems and a retreat into the threat of a less balanced diet or, possibly, food shortage.

In this era of the "world food crisis", wholesale environmental degradation in Africa and the startling failure of much technology transfer, some planners are facing up to the reality that there is much in the local repository of knowledge and organization which forms a basis upon which to build. But an enlightened planner wishing to follow this line immediately runs into the problem that works such as this one by Knight are almost unobtainable: instead static anthropological studies or an approximation to some western norm have to suffice. The logical and well supported exposition contained in this book is a model for similar studies elsewhere which should precede strategies and proposals for long-term change.

The work is written with a great sense of humanity and the reader never loses touch with the fact that this is a study of people. Only once or twice does the author lapse into unnecessary jargon which is the essentially dehumanizing vehicle so beloved of most planners. But, having paved the way, the author is now faced with the problem of replicating such studies and saving them acted upon because, in general, governments are not equipped to think in this universal way: this is the contrast betw an ecology, and management or administration. I would not want to fault such a worthy study but few teachers will be able to give it the recommendation it deserves while it costs £7.90 —and why did it take until 1974-75 to see the results of field work carried out in the mid 1960s?

Randall Baker

BOOKS



"The Whinler", a picture taken in 1915 of a Makah Indian; taken from "The North American Indians" by Edward Curtis who, from 1896 onwards, recorded, in over forty thousand negatives, the vanishing Indian tribes. Published by Gordon Fraser at £4.00 and £2.30.

The author as hero

Meditations on the Hero
by Walter L. Reed
Yale University Press, £6.00
ISBN 0 300 01735 9

We talk little about "schools" of literary criticism nowadays. New Criticism, the Chicago school and the Cambridge school are part of history, and despite the challenges of Marxists and linguists, a consciously eclectic attitude prevails in England and America. The critical mind is calm, and most of its passion spent. Such a view will not be acceptable to everyone, but it seems to lie behind the circumspect approach of one of our few genuine *contemporary* schools, the school of Yale.

Walter L. Reed is an assistant professor at Yale, and his book reflects the influence and, as they say in New Haven, the "imaginative structure" of two of his senior colleagues, Geoffrey Hartman and Harold Bloom, while being based on a thesis supervised by a third, Charles Feidelson.

Yale criticism, of which this is a distinguished example, is a fusion of Anglo-Saxon formal analysis with traditional European literary history. A typical strategy is to study a literary sub-genre—Hartman's "inscription poem", or Louis Marty's "poem of meditation"—which is presented both as valuable in itself and as a key to the imaginative "structure" of the age which produced it. Such a study will modulate, with a degree of erudition and a scruple which can sound uncommonly like pedantry, from empirical analysis to the explication of history as a sequence of ideal types and modes. Nor is there any doubt as to what stands highest in this Ivy League of historical essences. The greater part of the Yale school's output could be seen as a swirl of notes toward the definition of that elusive term, Romanticism.

Reed's subject is that obvious though neglected figure, the Romantic hero. His chosen texts are *Wuthering Heights*, *Moby Dick*, Lermontov's *A Hero of Our Time* and Kierkegaard's *Fear and Trembling*, four excellent choices. Reed views them as forming a sub-genre of "meditations on the hero", a construct which emphasizes the dialectical quality of Romantic heroism, its ironies and ambivalences, as well as its connexions with much that we take for granted in modern literature. The result is a highly suggestive book, backed up by diligent scholarship.

The hero expresses a revolt against Romantic self-consciousness; his actions are an overcoming of alienation and a negation of the over-reflective and analytical modern mind. In effect, he is *for* his time rather than of it. The result is that Romantic heroes, like Victorian churches, must involve revivalism of some kind. Reed dwells on the echoes of Milton, Shakespeare and Byron in the works of Emily Brontë, Melville and Lermontov, and the text from which he begins, Kierkegaard's *Fear and Trembling*, is an explicit meditation on the old testament heroism of Abraham.

Kierkegaard, whose influence is felt throughout, is relevant for other reasons. His studies of Romantic heroes are responsible for the categories into which Reed divides the subject of heroism in all the works under analysis. These are the categories of the hero's *relation with his "ground"*, natural or historical, with his audience as personified by the meditative consciousness of the narrator, and with himself, the inherent division of self and role.

Reed presents Heathcliff in *Wuthering Heights*, for instance, not as a figure with a historical ground, a Marxist symbol of the proletariat, for example, but as an "eternal" hero. His attempts to *enter* history (he notes the many scenes of "breaking and entering") by means of his love for Cathy and his acquisition of the Earnshaw and Linton estates are ultimately futile. Reed also suggests parallels between the two protagonists of the novel and its two narrators, Lockwood and Nelly Dean, and speculates on the origins of Cathy and Heathcliff as projections of Emily Brontë's psyche. He sees his authors as discovering their own identity through the heroic projection, while using the figure of the meditative narrator to assuage their feeling of self-division.

This is a crude summary, and by taking the most familiar example I have done little to suggest the variations that Reed plays on his themes. This book *deserves* to be widely read and considered, but where it has weaknesses is in the aloofness with which Reed regards his own historical ground. The fact that all his texts belong, give or take a year, to the decade of the 1840s is attributed simply to common literary influences, and Reed's brief postscript on modern literature slips all too easily into the mode of reactionary *Kulturcritik sinistre*.

Since Romantic hero-worship was one element in the rise of Hitler, the genre he has described is over, and, he implies, perhaps better so. Modern writers see heroism in an unprecedentedly corrupt and problematical light; hence the last of the series, the "meditation on the hero to end all such meditations" is Mann's *Dr Faustus*. It is no dis service to that great work to say that the figure of the hero is not going to lie down so gently, no matter what pens and scholarly aptitudes they are writing for him at New Haven.

Patrick Parrinder

Metropolitan achievement

Education for National Efficiency: the Contribution of Sidney and Beatrice Webb
by E. J. T. Brennan
Athlone Press, £5.00
ISBN 0 485 11151 9

In his contribution to *Fabian Essays* in 1889 Sidney Webb showed no special interest in educational matters. Yet in the next twenty years he became the acknowledged expert on London education and played a decisive part in shaping a system which lasted until the Second World War. Through his chairmanship of the Technical Education Board of the London County Council he had ensured the development of secondary and vocational education and laid the foundations of the scholarship structure. The creation of the London School of Economics was entirely due to him and Beatrice. With R. B. Haldane he was the instigator of the reform of London University and they shared the credit for setting up the Imperial College of Science. The wirepulling of the Webbs was also central to the passage of the controversial Tory Education Acts at the beginning of the century, which led among other things to the emergence of the LCC as the largest education authority in the world. The Webbs left many legacies but their impact on London education was perhaps the most substantial public achievement of their long and varied lives.

Mr Brennan's well planned and most useful book (perhaps it may stimulate some further much-needed studies of specific Webb interests) combines a balanced commentary on the Webb view of education with reprints of articles, Fabian tracts and extracts from their books: it thus provides an account of their passage through the tangled educational issues of the period, which was the most criticized and yet most skilful example of their talent for permeation. It shows quite clearly why, at the most active phase of their careers, the Webbs put so much effort into education. For them, the creation of a meritocratic elite was the key to national regeneration.

The Comteist vision of a controlled and efficient social order, which left an enduring mark upon both Sidney and Beatrice, made them collectivists. The need for a caste of disinterested experts to run such a society led them into educational reform. In the early nineties, when Britain was plainly failing to match the technical and scientific progress of Germany and the United States, such views led them straight into the company of those who felt that survival demanded rapid and far-ranging improvements in standards—a national minimum in education was the logical counterpart of a national minimum in welfare and moral discipline. Above such a minimum, specialist training of the able was needed: the Webbs did not seek educational equality but the opening of new careers to the talents.

It was this belief, as much as a growing distaste for Gladstonian liberalism, which made the Webbs veer away from their fellow Fabians and their old Radical associates, taking up instead with Rosebery and the Liberal imperialists, then Balfour, then Mackinder, Milner and the social imperialists they recruited into their abortive attempt to make the Co-efficients dining club the nucleus for a new party of national efficiency. Their opposition to the Independent Labour Party and their disinterest in the new Labour Party, often glossed over, cannot be properly understood unless it is set in the context of the educational policies which for them were the alternative to independent political action. Mr Brennan's book, which focuses on the two decades in which the Webbs were at odds with the bulk of the emerging socialist movement, is thus valuable to students of politics as much as specialists in the history of education.

Its point would have emerged more clearly, perhaps, if he had devoted more space to Webb's differences with the Fabian faction led by Graham Wallas and Stewart Headlam—the champions of the School Board and the allies of the Nonconformist lobby. The delay in publishing the Fabian tract *The Education Muddle and the Way Out*, which Mr Brennan only mentions in passing, was the result of more than two years of in-fighting within the Fabian Society. It was this dispute, which threatened to intensify the divisions in the society caused by the Boer War, which provides the most likely explanation of Sidney's reluctance to come out openly against the School Board at a time when he was privately manipulating the legislation which was to abolish it.

The part the Fabians played in these complex intrigues is important; it is a pity that Mr Brennan was unable to explore it more thoroughly. For Sidney considered it vital to maintain control of Fabian policy. The society, as he made plain to Edward Pease in March 1903, was the only secure base for the tricky and politically risky operation he was conducting against his own Progressive Party in London and against the vacillating Tory government.

Norman MacKenzie

Taxing problems

The English Public Revenue 1660-1688
by C. D. Chandaman
Oxford University Press: Clarendon Press, £16.50
ISBN 0 19 828268 0

This book originates in a thesis, so often cited in the last twenty years that some readers may approach it with anticipations of familiarity. They would be wrong, except in so far as the thesis's demonstration of the unreliability of Dr W. A. Shaw's account of Restoration finance has been already publicized. Professor Chandaman, who gallantly dedicates his book to Dr Shaw's memory (as a tribute to his calendaring rather than to his interpretation of documents), has provided a definitive account of the revenues of Charles II and James II. It is a major contribution and also provides important data and arguments for economic historians.

It also provides damning cumulative, though mostly indirect, evidence of Charles's irresponsible extravagance and of the irrelevance of the French subsidies to any of his real financial problems. This may come as no surprise, but the demonstration of the often constructive reasoning behind the Commons' attitudes to fiscal problems may. Professor Chandaman is particularly illuminating on their attempts to reform the system of direct taxation and demonstrates the significant unity and administrative experience under Charles II combined to produce the Land Tax of 1698, based on both the new subsidy of 1671 and the interregnum assessment. He sees the period of real financial difficulties as from 1664 to 1670, though these difficulties were mainly caused by the Second Dutch War, without which the Restoration financial settlement would have become viable. Crown and Commons shared responsibility for the war but after 1671 Charles's financial difficulties were mainly of his own making. An important element in his ability to weather the Exclusion crisis was the improvement of the crown's financial position. Professor Chandaman argues that the Commons in 1685 did not behave with reckless and trusting generosity towards James II. They merely repeated the Restoration financial ordinary provision to pay Charles's debts and provide for the navy. Nevertheless the original suspicions of the Commons at the Restoration about the dangers of endowing the crown with open-ended resources from indirect taxation as its ordinary revenue proved justified. James received an average of £1,600,000 a year, £300,000 more than receipts in 1683 and £400,000 more than had been promised by the Cavalier Parliament in 1661.

These increases were due to improved administration which enabled the Crown to end revenue farming and to profit from the trade expansion of the 1680s. The end of revenue farming marks an obvious, though usually underemphasized, difference between the economic and fiscal structures of England and other European states. Professor Chandaman gives a precise and detailed account of how this came about administratively and quantifies the fiscal consequences. Administratively the most important periods seem to have been those of the Treasury Commissioners of 1667-1672, apparently dominated by Downing and Clifford, and those appointed in 1679 with Laurence Hyde, Earl of Rochester, as first Lord. Danby appears as less significant as the Treasury than Rochester. Professor Chandaman raises a whole series of questions about both economic and administrative policies which deserve further investigation now that he has successfully established how to interpret the evidence for the revenues and debts of the government.

Professor Chandaman has not attempted to unravel the even greater complexities of the evidence of departmental expenditures, though his work might have been made still more useful by giving some details of the grants of pensions. Any additional space and expense would have scarcely mattered, since the Delegates of the Clarendon Press have already priced his book out of the reach of most individuals and many libraries, while adding self-indulgence to injury by charging less for the much longer and more expensively produced first volume of the history of their Press. The least they could do to make amends would be to publish a cheap edition of Professor Chandaman's book, including the eight graphs, but not the appendixes.

Comprehensive

John Locke, An Essay Concerning Human Understanding
edited by Peter H. Nidditch
Oxford University Press: Clarendon Press, £15.00
ISBN 0 19 824386 3

The production of a critical edition of the *Essay* should greatly benefit Locke studies; it also marks a new beginning. Hitherto the only works of Locke to have critical editions were the *Two Treatises of Government* and the educational writings. But the present book is to be the first of a whole series of critical texts of Locke, the Clarendon edition of the *Works of John Locke*, with Professor Nidditch as general editor.

Scholars need a complete *text* of the *Essay*, soundly based on the editions published or prepared in Locke's lifetime, and that is what Peter Nidditch has provided. The only good unabridged modern printing was Yolton's Everyman, which is merely a modernization of the fifth edition (1706). The Scolar Press photo-reprint of the first edition is useful, but insufficient, because Locke added and altered so much right up to the fifth edition. Nidditch, for reasons which he gives, takes as his copy-text the fourth edition (1700), and retains its spelling and its other formal features, while making justifiable corrections based on the other early editions. His critical apparatus, at the foot of the page, shows all the material, i.e. verbal, variants of the early editions, together with the significant variants of punctuation; while the other formal variants are recorded and tucked away in a separate register near the back, in order to keep the apparatus itself uncrowded and usable.

A simple but important advance is the addition of line numbers, making it possible for the first time even to refer readily to the *Essay* by page and line. Such references, which can pick out particular occurrences of words, are found in the 35-page glossary, an extremely valuable feature of the book. It explains words or senses no longer current, senses that needed distinguishing and foreign words. The glossary is both accurate and informative, though doubtless the *Essay* contains more items that need explanation. The main content of the introduction is a detailed account of the printing history.

BOOKS

Polymers

Trends in Macromolecular Science
edited by Hans Georg Elias
Gordon and Breach, £5.20
ISBN 0 677 15860 2

After a decade which has seen the death, or at least the partial strangulation, of so many fundamental research laboratories it is a great pleasure to welcome a venture such as the Midland Macromolecular Institute in Michigan, a new fundamental polymer research institute, unfettered in its terms of reference and housed in an intriguing new building. To commemorate and dedicate this laboratory a number of leading polymer scientists gave lectures which are assembled in this little book.

Leaving aside the introductory froth, which includes a description of the history and function of the institute, we find first a statement by Paul J. Flory, upon whose career the seal of the Nobel Prize for chemistry has recently been set, spelling out the curious way in which the concept of macromolecular structure was for so long shunned; it is an account which should be of interest to every scientist and every science historian.

Flory also contributes an abstract of a technical lecture which appears to summarize much of his recent thinking, and many of us will regret that the full text was not included, even though we are told where to find it.

The first of the fully technical lectures, that of Overberger and Sannes, should be compulsory reading for all chemists. They show here how the ingenious application of polymers as reagents in the place of small molecules confers a variety of benefits on possible synthetic processes. The ease with which saturation can be attained and with which products can be removed is exemplified by the well-known Merrifield synthesis of polypeptides, only obliquely referred to here. But Overberger and Sannes cite some beautiful examples of the way in which polymers can be used to coax a reaction towards the desired outcome.

Thus cyclization can be achieved without working at almost impossibly low dilution in order to eliminate competitive bimolecular processes. Conversely self-condensation can be eliminated or reagents can be brought into close proximity by specific binding on adjacent sites. It is here that the chemist begins to approach the enzyme in the encouragement of specific reactions. Another interesting example is a reflection of the differential ease with which molecules can penetrate a polymer particle; relying on this principle, the ratio of the rates of hydrogenation for cyclooctene/cyclohexene is as high as 2.5 compared with 1.0 for homogeneous reaction, and much higher differentials are available with more disparate substrates. This chapter contains a wealth of synthetic delights, many of which have not begun to achieve the common currency they deserve.

Calvin takes us on a stimulating tour of his ideas covering the origin of biopolymers, the nature of the structure of proteins at all levels and their interaction with nucleic acids and with lipids. His brief discussion of the origin of the genetic code will not be universally agreed but it is interesting to find that his chapter exists in juxtaposition with that of Overberger and Sannes, who provide in their account evidence to support Calvin's intuitive views on selectivity of reaction rate. As an overview of biopolymers this lecture is most welcome and stimulating.

The chapters on polymers in medicine (D. J. Lyman), structure-property relationships in polymers (E. H. Andrews) and mechanical fabrication of thermoplastic polymers (T. Alfrey) take us through bioengineering, mechanical properties and processing, in each case drawing attention to current concepts and, where appropriate, applications. Thus one covers the whole range from polymer preparation to extrusion moulding.

This is a slim volume but one which is one of all proportion to its size in its value. It can usefully serve as the basis for much useful and valid propaganda on behalf of polymers by and to scientists at all levels.

Elemental

Natural Hazards: Local, National and Global
edited by Gilbert F. White
Oxford University Press. £7.50
ISBN 0 19 501756 0

Avalanche, coastal erosion, drought, earthquake, flood, fog, frost, hail, landslide, lightning, snow, tornado, tropical cyclone, volcano and wind: there are so many natural hazards that it is hardly surprising that this splendidly produced volume should be both long and costly. By definition, no natural hazard exists apart from human adjustment to it. Human initiative and choice are always involved; floods, for example, are hazards only because mankind is tempted to occupy flood plains. At one extreme the impact may be only local (one of the few chapters concerned with Britain is a study of the effects of the flooding of the River Severn upon the lowerlying parts of Shrewsbury). At the other extreme, the effects may be national and international even if not global; the continuing drought in the Sahel of West Africa during recent years and the tropical cyclone in coastal Bangladesh in 1970 that caused such extensive damage are good examples.

The volume contains 32 essays and the contributors cover natural scientists, social scientists (geographers being the largest group), geologists, hydrologists and psychologists. The catalyst for such a comprehensive volume undoubtedly has been its editor, Gilbert White, who was a professor of geography was asking 30 years ago why people chose to occupy hazardous floodplains and what would be the effects of public action to reduce flood losses upon local land use and national economy. His interests were greatly helped by the establishment in 1968 of a man and environment commission of the International Geographical Union. This commission stimulated the research for these papers which were presented at its meeting in Calgary in 1972.

There are four principal sections in the book. The largest consists of a series of studies of individual and community response to natural hazards in a wide variety of countries and cultures, with a chapter that discusses the problems involved in "the use of standardized questionnaire for cross-cultural research on perception of natural hazards". Section two has two essays on decision processes and adjustment to natural hazards. The third consists of a series of national reviews for selected countries—New Zealand, North America, Japan and the USSR—and the final section includes global reviews of the three most damaging of all hazards — tropical cyclones, floods and earthquakes.

What does a volume such as this achieve? Does it help Mrs Jimoh of Kenya, as one writer puts it, to tell her "that she lives in Ministry of Agriculture inspected, measured, mapped, and certified high ecological potential, agroeconomic zone, level hills, central Machakos"? And what of 254 farmers in north-eastern Tanzania really make of the questionnaires containing 170 questions?

Even in Shrewsbury we read that "the level of awareness of the flood hazard among floodplain inhabitants was generally low", while citrus farmers in Florida appear to cope remarkably well with frost hazard without beginning to know about "game theory in citrus protection".

But these perhaps are unworthy comments. There is no doubt that some, if not all, of these researches have resulted in practical action, for example, in Bangladesh. Perhaps part of the work is more sophisticated than it need be and assumes a precision which cannot reasonably be expected in the behavioural sciences. The editor sees these contributions as a series of "loosely coordinated efforts" designed to deepen the understanding of social-physical interactions and to begin the construction of a more general theory of behaviour in extreme situations. He believes that these studies are exploratory rather than definitive and he is convinced that they promise both new understanding and practical influence. They have certainly roused interest and continuing concern in aspects of life that individuals, nations and their governments neglect at their peril.

Quickly!

Fast Reactions
by J. N. Bradley
Oxford University Press: Clarendon Press, £3.25
ISBN 0 19 855456 7

Professor Bradley's book starts well with a brief but lucid discussion of the role of fast reactions in chemical kinetics. The introduction suggests that the author will bridge the divide which has grown up between gas phase and solution kinetics.

Unfortunately the book fails to live up to its early promise. Fast reactions in the gas phase are treated well, but sections on solution kinetics are poorly presented and are inferior to the treatments given by Caldin and Hague in their books on fast reactions. Useful comparisons between gas phase and solution reactions are made only in the chapter on flow techniques. The reader is not helped to understand why fast bimolecular reactions are treated by different theories in the two phases, and a consideration of the "cage effect" should have been given.

The author has chosen to subdivide his book "according to the type of technique involved rather than in terms of classes of experimental behaviour. . . . To compensate for this categorization by technique illustrative examples have been selected which should provide over the complete text an overall view of recent or current interest in kinetics".

This approach works well in certain parts of the book. Shock waves are naturally well covered, and the chapters on crossed molecular beams and infra-red chemiluminescence provide useful introductions to these topics. However, in other chapters the material is unbalanced, far too much space being devoted to techniques, and too little to applications and examples. For instance, the extremely important applications of relaxation techniques in biochemistry are accorded only two very general sentences, without mention of a specific reaction that has been studied. The book is not up to date and the tremendously important advances in picosecond work are not mentioned.

There are factual errors in the description and mathematical treatment of relaxation processes, errors have been made in copying tabular material from other reviews, and unexplained changes of symbolism occur in the text.

A distasteful feature of the book is the publisher's insertion of footnotes cross-referencing to other volumes in the Oxford Chemistry Series. This is particularly worrying because the author's list of references is inadequate to support the text. A student wishing to learn about fast reactions in solution would have to use another source text.

D. M. Goodall

Buffers

Buffers for pH and Metal Ion Control
by D. D. Perrin and Boyd Dempsey Chapman and Hall, £3.50.
ISBN 0 412 11700 2

Most chemists and biologists at some time or other need to use solutions of known and constant hydrogen ion or metal ion activity. This laboratory manual is therefore potentially of considerable value in bringing together within a small compass much that the experimentalist needs to know in order to choose and set up systems suitable for his particular purpose.

The authors begin, after a very brief introduction, with a short but adequate account of the basic physical chemistry involved. Here and later throughout the book there are worked answers to problems which relate to the topics under discussion. There follow short chapters on applications, limitations, and choice of new buffer systems. After discussing partially aqueous and deuterated systems, the maintenance of constant metal ion activities is discussed in 15 pages. An account of methods of reagent purification and solution preparation concludes the text. There are 42 pages of useful tables as appendices.

Maintenance of life

Techniques and Topics in Bioinorganic Chemistry
edited by C. A. McAuliffe
Macmillan, £20.00
ISBN 333 16688 4

Metal ions play an important role in catalyzing reactions which are necessary for the maintenance of life in mammals, birds, insects and plants. The catalytic importance of metal ions in enzymes is emphasized by the fact that a third of all known enzymes require the presence of metal ions before they show any biochemical activity. *Understanding the role of metal ions in these biological systems* therefore presents a demanding challenge for biochemists and inorganic chemists. In recent years this interdisciplinary area has grown rapidly and has come to be known as bioinorganic chemistry. *Techniques and Topics in Bioinorganic Chemistry* reviews some of the important developments in this field and should be a useful introduction to research workers entering the field and lecturers preparing undergraduate courses on this topic.

The first chapter, by M. W. Makinen, underlines the important contribution made by X-ray crystallographic studies on metallo-proteins. In particular he discusses the electronic and structural properties of myoglobin, haemoglobin, carboxypeptidase, carp albumin and staphylococcal nuclease. For these proteins a clear definition of the function of the metal atom has almost been attained. Unfortunately the literature has only been reviewed to the end of 1972 and therefore some important recent results on haemoglobin and related model systems are not discussed.

J. M. Pratt discusses the principles of catalysis by metalloenzymes with particular emphasis on oxygen-carrying proteins, catalase and peroxidase enzymes and nitrogen fixation. I am not sure that the field is sufficiently well-developed for the conclusions he has attempted to make; nonetheless his speculative and well-reasoned analyses are certainly interesting and thought provoking. His view of the nitrogen fixation problem seems to have been overtaken by recent results on model systems.

F. L. Bowden's discussion of the biochemical function of molybdenum underscores the limitations of inorganic spectroscopic techniques when applied to complex systems. In the absence of X-ray crystallographic studies on molybdenum-containing proteins the coordination environments of the metal atoms in these proteins remain ill-defined. In the absence of this fundamental information the author has given a good general account of aqueous molybdenum chemistry and has evaluated possible model systems.

There are also less substantial chapters on polynuclear iron (III) proteins and nuclear magnetic resonance probes in biochemistry. It is a pity that a chapter on the ferredoxins was not included in this book. Recent developments in this area have shown how studies on model systems combined with X-ray crystallographic studies on the proteins can lead to a clearer understanding of the fundamental nature of the problem.

This is certainly a timely and interesting review volume but it is not sufficiently comprehensive or up to date to justify its price. Even the most well-endowed libraries will have to think twice about spending £20 on this one volume.

D. M. P. Mingos

*'I back him all the way—contrary, lovable, muddled, and original thinker that he is—because of the aggressive purity of his abstract thinking'**

Class, Codes and Control
BASIL BERNSTEIN

Major reviews for the third volume of Basil Bernstein's collected articles and essays. (*Brian Jackson in the *Guardian*

The essays in this new volume sketch the effect of class relationships upon the institutionalizing of elaborated codes in the school. Bernstein discusses the changes in the moral basis of schools and looks also at the changes in the coding of educational transmissions.

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Second edition £3.25

Routledge & Kegan Paul

BOOKS

A socialist evangelist

Keir Hardie, Radical and Socialist
by Kenneth O. Morgan
Weidenfeld & Nicholson, £8.00
ISBN 0 297 76886 7

Considering the importance of Keir Hardie in the early history of the Labour Party, it is surprising that we have had to wait sixty years after his death for a scholarly and critical biography. This has now been supplied by Dr Morgan who, fresh from writing a distinguished short life of Lloyd George, has turned to the study of the career of the Scottish miner who was the first truly independent Labour MP (for West Ham South, from 1892 to 1895), who represented Merthyr for Labour for 15 years until his death in 1915, and who is commonly looked back to as the outstanding pioneer of the Labour Party.

This is an excellent volume. Previous potential biographers have been deterred by the report that when William Stewart completed his official—and hagiographical—life in 1921 he bundled Keir Hardie's papers into sacks and burnt them all.

Another deterrent was provided by Emrys Hughes, Hardie's son-in-law, who clearly thought that he had a current in the subject while he was alive—but did not in fact make any great contribution in the end. But Dr Morgan has ferreted out a surprisingly large amount of personal correspondence from Hardie in other private or public collections —or in some collections which (like the Johnson Papers at Bristol) seem to be hovering between the private and the public. He has been able to consult the papers left by Ramsay MacDonald and those of Sylvia Pankhurst—the latter's having a special personal importance because she and Hardie appear to have been lovers for a time. The author has indeed ranged far and wide in the pursuit of a man who himself travelled very widely, and who attached special importance to international links and to the study of social problems throughout the empire.

Dr Morgan evidently has a high regard for Hardie, and tells us in his preface that his own first-born son is called David Keir (David, one may suspect, after the subject of his previous biography). So although the work deals with Hardie's political standpoint with critical care, it is still a friendly and sympathetic study, as nearly all biographies should be. It is perhaps a shade disappointing not to hear a little more about Hardie's early years amid the Lanarkshire and Ayrshire miners: by the time we reach page 19 we are more than halfway through his life. As for his later political career, there are some interesting reinterpretations.

Contrary to the views of some other historians, the author sees the emergence of Hardie's socialism as a very gradual process, and one which always allowed him to keep open his links with Gladstonian radicalism. Certainly Hardie always respected Gladstone, and declared in the Mid-Lanark election of 1888 that a vote for himself was "a vote for Gladstone". When elected to Parliament he was prepared to collaborate with the radical wing of the Liberal Party. But in founding the Independent Labour Party in 1893 he thought that he was establishing a socialist party, which in an undoctrinaire fashion would, as he put it, "bring the movement down from the arid realm of science to the human level of the man with the vote". When the ILP failed as a separate force in the 1895 election, he saw that socialists would have to harness the strength and funds of the trade unions in order to form a mass political party. The "labour alliance" which brought these elements together in the Labour Representation Committee in 1900—now the Labour Party—was to a large extent of his making. For better or for worse, this was of decisive importance for politics in twentieth-century Britain.

This biography throws much light on the stresses and strains inside this alliance, which were as marked then as they are today. One of the conflicts came when the Labour Party, 29 strong, first assembled at Westminster after the 1906 election. Who was to be chairman—a trade unionist or a socialist? (There was no talk as yet of a "leader" of the parliamentary party.) Two votes were taken, in which Ramsay MacDonald, being also the secretary of the extra-parliamentary party, abstained.

The result was a tie between Hardie and Shackleton of the Lancashire Weavers. There were cries of "MacDonald, you must vote", and so a further ballot was held with MacDonald taking part. This time Hardie won by one vote. MacDonald later claimed to have voted for Hardie, and Dr Morgan accepts this, as against contrary statements by contemporaries and historians. Edward Pease of the Fabian Society (who was present as a member of the extra-parliamentary executive but not entitled to vote) told me in 1949 that he thought MacDonald could not have voted for Hardie because John Hodge said to him privately "I changed sides" (i.e. from Shackleton to Hardie). Such was the "Labour alliance" which Hardie always doggedly defended in public but was constantly criticizing in private.

The book is interesting for its description of the quirks of Hardie's personality, notably his tendency to dabble in spiritualism, which accounted for his close friendship with Frank Smith, formerly of the Salvation Army. It is clear that after he became an MP Hardie spent relatively little time at home in Cumnock, and that his circle of friends in London, for instance the Pankhursts, and Joseph Fels, the American soap manufacturer and "single-tax" enthusiast, was almost entirely middle-class. It was bohemianism, rather than the assertion of working-class identity, which led to his first appearance at Westminster in a cloth cap. Yet for all that he had a genuine concern for the poor and neglected, and his work as "member for the unemployed" was of great importance in bringing to the fore the hitherto ignored problem of the out-of-work. There was a similar genuine concern in the role that he played on behalf of women's suffrage—which had the effect of precipitating his famous statement in 1907 that he would rather resign from the party than fail to obey his conscience: the origin of the parliamentary Labour Party's "conscience clause".

But it is, in the end, difficult to make out, as Dr Morgan would rather like to, that Hardie was of much effect as a parliamentarian. He served as chairman of the parliamentary party for two years only, and then gave way to Arthur Henderson. A believer in Thomas Carlyle's view of the importance of "great men", among whom he ranked himself, he did not enjoy consulting colleagues. His role was to agitate, or, perhaps more accurately, to preach a new gospel, not in Parliament but in the country. This accounted for his curiously ambivalent attitude to the young Victor Grayson, who was really doing what he himself would have liked to do if he had been a generation younger. It is a pity that Dr Morgan does not quote any section of a speech by Hardie, illustrating the amount of religious terminology and allusion that it was likely to contain. Speaking to a Labour Church congregation at Pendlebury on November 27, 1898, according to the local ILP newspaper he "preached an eloquent sermon on the familiar text 'Consider the lilies how they grow' to a large and appreciative audience". This was the stuff of early socialist evangelizing, and Keir Hardie was its most notable and charismatic figure.

Henry Pelling

Geographical balancing act

The Wartime Alliance and the Zonal Division of Germany
by Tony Sharp
Oxford University Press: Clarendon Press, £6.00
ISBN 0 19 822521 0

A. J. P. Taylor once said that the reason why governments dislike opening their archives is that the contents of these are mainly so insignificant that the governments concerned will look foolish. This dictum is partly true and partly false. The overwhelming mass of the material in any collection of archives, public or private, is boring and trivial, but in among all the rubbish—the endless copies of the same document, the minutiae of petty transactions deservedly forgotten by their transactors—there is occasionally, very occasionally, a nugget of gold.

The British and American documents on the diplomatic negotiations of the Second World War, recently opened to researchers, are a case in point. The course of the relationship between the leaders of what Churchill called the "Grand Alliance" has long been very familiar to us, in outline. The established studies by Herbert Feis, William H. McNeill, Chester Wilmot and others made clear how much the political discussions between the Big Three, at and between the summit conferences of Tehran and Yalta, were influenced by the fortunes of battle; how Roosevelt and Churchill, unable to promise Stalin a "second front" in 1943, conceded instead the formula of unconditional surrender; how they felt obliged, in order to bring Stalin into the war against Japan, to make substantial concessions at Poland's expense at Yalta; and how in general, from the moment of Russia's military triumph at Stalingrad in 1942-43, the western leaders—Roosevelt more than Churchill—sought to maintain the coalition by adopting a conciliatory attitude to Stalin's diplomatic demands.

The research of recent years on this period, and particularly the work by PhD candidates and others on the new resources of the Public Record Office, has been devoted to illuminating the obscurities and refining the nuances of this general picture of events. (Even some of the writings of the revisionist school in the United States, although they have thrown down a radical challenge to the accepted western interpretation of the Cold War and its prehistory, have probably made their greatest contribution by clarifying some of the *details* of western policies.)

Dr Tony Sharp's study of how the wartime allies divided Germany into zones of occupation is an excellent example of the sort of detailed research—in this case, judicious and *without* any dogmatic revisionist purpose—which the opening of the archives has made possible. As the author explains, he has not tried to discuss the wartime alliance as a whole, but has deliberately concentrated on the specific theme of how the zones of occupation were settled and how this issue was affected by the military background to the negotiations.

Several important points are covered by Dr Sharp's analysis. He shows the extent to which, when the British and American governments negotiated with the Russians, they were preoccupied with the east-west strategic balance which would emerge from the geographical division of Germany. There is also a good deal of new material on the Anglo-American discussions about the possibility of the United States occupying the north-western area of Germany which ultimately became the British zone instead. And there is a revealing dissection of the question of how France was allocated both a zone of occupation and a sector of Berlin.

Apart from concentrating on a detailed narrative of these decisions and their immediate strategic background, Dr Sharp has done a good deal to enhance our understanding of how the wartime alliance functioned at the level of senior diplomats and military commanders—from many of whom he has derived some valuable information. It has to be said, however, that many of the familiar defects of an insufficiently revised PhD thesis are present in these pages, and that Dr Sharp's presentation of his analysis will probably restrict its readership to a group of advanced specialists.

Almost every paragraph is crammed with dates, with sometimes insignificant quotations from the archives, and with a proliferation of obscure initials and abbreviations, so that even the interested but non-initiated reader will have great trouble in distinguishing the wood from the trees. Such readers will regret that Dr Sharp does not tell them, for instance—as he certainly could have done—why exactly the western powers accepted the cutting-off of Berlin from their own zones of occupation. This is an important and learned work, but very much one for specialists

Roger Morgan

Ways of life

The Interpretation of Cultures
by Clifford Geertz
Hutchinson, £7.50
ISBN 0 09 122800 X

Just as fieldwork is used as a sort of initiation ritual by the professional body of anthropologists, so the possession of a private definition of culture has become, in America, a necessary attribute of aspirants to the role of important theorist. It is therefore not surprising that the principle of selection in this collection of essays by Clifford Geertz, the resident anthropologist at Princeton's Institute for Advanced Study, should be that they "bear, directly and explicitly, on the concept of culture". The collection is not entirely representative of Geertz's work since some of his most interesting analyses—of ecology, agricultural involution and Javanese social history—are barely touched on.

The definition of culture itself, phrased in a number of ways by Geertz, is in his words "essentially a semiotic one. Believing with Max Weber, that man is an animal suspended in webs of significance he himself has spun, I take culture to be those webs." While unique in some ways, this definition is not altogether outside the general trend among American anthropologists to progressively narrow their original grand, all-embracing view of culture, and to limit themselves to the analysis of what Parsons, whom Geertz greatly admires, called the "ideational".

Except for the first selection, on "thick description" all the essays are versions of previously published material. The core of the book is formed by the analyses of religion, ritual and ideology. In these articles what counts for Geertz is his ability to convey the meaning of religious belief, and the "cluster of sacred symbols" which goes with it, to the reader. They are all marked by their emphasis on examining the way cultural systems allow the members of a society to find meaning in their everyday experience. The interpretation of culture, or rather cultures, since each must be approached individually, should at all costs avoid "devitalizing" that experience. Consequently Geertz has special talents in those directions. What one remembers after reading the book are the marvellously evocative descriptions of Indonesian rituals: the Balinese mock battle between the witch Rangda and the lovable monster Barong in "Religion as a Cultural System"; the Javanese funeral in "Ritual and Social Change"; and best of all the Balinese cockfight. This last description is a piece of sheer entertainment in which the reader forgets the analytic intent; and the question of "meaning for whom?", which troubles the abstract discussion, becomes irrelevant.

Elsewhere Geertz writes: "I grow uncomfortable when I get too far from the immediacies of social life." While this in part explains his mastery of theatrical description (perhaps a better term than his own "thick description"), it also partly explains the theoretical deficiencies in the work. This is manifest when he comes to study the work of other social scientists. The discussion of Lévi-Strauss is a caricature of all the criticisms directed at the French anthropologist by an empiricist and positivist social science which Geertz elsewhere rejects. It is ironic that Lévi-Strauss should be accused of idealism by Geertz, and predictable that he is taken to task for not having derived his theory directly from fieldwork experience. To be taken in the same light are the frequent and inaccurate references to Marxist theory for Geertz has clearly not read Marx seriously. His failure to discuss the achievements of modern linguistics is also surprising.

Perhaps more disturbing is his conception of the relation between ideology and social structure, discussed in the articles on politics in the new states. Here he constantly confuses ideology, social structure and behaviour, demonstrating both a naivete about non-experiential reality as well as the dangers inherent in the narrow definition of culture which he employs. In short, while in these essays Geertz produces some interesting criticisms of positivist anthropology, he has chosen to pursue an alternative in the realms of literary criticism rather than to rethink the scientific basis of the discipline.

Joel S. Kahn

Where it all began

Ancient Cosmologies
edited by C. Blacker and M. Loewe
Allen & Unwin, £5.95
ISBN 0 04 100038 2

What goes round what, and why, and where do the powers that be and man himself fit into it all? Nine lectures on ancient cosmologies lead us through a maze of answers with just the right amount of wit and argument and pictures to keep us going.

Carmen Blacker points out that some are more concerned than others to know how things began, but rather overshoots on the peculiarity of the Jews in this respect. J. M. Plumley emphasizes that the Egyptians shared this question with "us" (whoever "we" are) and W. G. Lambert expatiates on etiological myths of Mesopotamia which he humanely refers to as "Just So Stories.". R. F. Gombrich manfully expounds Hindu, Buddhist and Jain cosmologies in short space, but without the time to say very much about the "undetermined questions" of Buddhism, important in this connexion as a kind of anti-cosmology. G. E. R. Lloyd points out interestingly that a contradictory alternative can be documented for every major theory held by the Greek, Some other Europeans, the Scandinavians, are pleasantly introduced by H. R. E. Davidson, Intrinsically they are no more important than the Tikopians, the ancient Japanese or the Tungus, but then the World Tree was either an oak or an ash or a yew and not a bamboo or a silver birch, which reminds one that the *axis mundi* is never far from where one is. This

Contractual relationship

Social Exchange Theory
by Peter Ekeh
Heinemann Educational, £4.50 and £1.80
ISBN 0 435 82275 6 and 82276 4

Dr Ekeh is interested in what he calls the individualistic and collectivist traditions in Western social science. On the one hand there is British and American sociology; on the other, French sociology and British social anthropology. He sees their relationship as one of fruitful mutual irritation and, if incapable of synthesis, none the less constantly provoking new developments in the theories of the alternative tradition. Such schematic approaches have their value and he has chosen a particularly interesting topic through which to explore the issue, for (to put it crudely) one can look at social exchange as an imposition upon individuals in the interest of a broader social order or as the basic mode of individual adaptation to the interests of other individuals; social contract or personal contract?

Homans has described his pained reaction, as a student, to Durkheim's proposition that human institutions were geared to the maintenance of a super-individual society and he provides Dr Ekeh with his prime example of an individualist exchange theorist. Homans builds on behavioural psychology and sometimes on crude economics to construct a model of two-party interaction which would save the right of man (enshrined in the constitution) to the free pursuit of individual happiness.

The contrary view, which Dr Ekeh finds most fully developed in Lévi-Strauss's theory of kinship, is that two-party exchanges are less significant than exchanges involving three or more partners, and that the logic of exchange relationships cannot be reduced to individual interests and their mutual adaptation but must be understood in terms of the broader requirements of social integration.

Dr Ekeh skilfully exposes the weaknesses of Homan's theory, but perhaps a more detailed consideration of its relationship to laissez-faire economics and even utilitarian philosophy might have given his critique greater historical resonance. On the whole he prefers the anthropologists, not only Lévi-Strauss but also Malinowski who, he shows, was a more subtle utilitarian than Homans and even Frazer, whose theory of exchange largely anticipated Blau, though Frazer modified his position in response to Malinowski's analysis of the *kula*.

Perhaps the fundamental problem for all exchange theorists is inequality. For Lévi-Strauss, inequality is the "inherent threat to any system of generalized exchange. Blau is forced to deny the possibility of sustained inequality, since the alternative would be to accept that unequal power means exploitation, so that often individuals are not equally free to choose — indeed most people are effectively denied all choice in critical areas of social life; they must give, but cannot take.

Dr Ekeh has some sensible things to say about this problem and one day he might like to develop the argument with reference to the most sophisticated modern transaction theory, that of the Norwegian anthropologist Frederik Barth.

Dr Ekeh writes clearly and his arguments are always carefully weighed and pursued with precision and fairness. Some of his original suggestions about exchange theory would bear development, though occasionally he slips up through ignorance of contemporary anthropology—for example, he should have read Sahlins before developing his argument about generalized exchange. Dr Ekeh has now returned to Nigeria from the United States and this book may represent the beginnings of theoretical sociology coming out of Africa. At any rate I am sure his former teachers will regard it as the first instalment of a fair exchange.

Adam Kuper



Women's status was high in the early Greek and Roman civilizations. The "Mother-Earth" cults had an entirely female membership and the High Priestess would have appeared somewhat like this Minoan statuette. © Radio Times Hulton Picture Library, from "Witchcraft in British History" by Ronald Holmes, Muller £5.50.

Archetypal

Studies in Social Anthropology: Essays in memory of E. E. Evans-Pritchard
edited by J. H. M. Beattie and R. G. Lienhardt
Oxford University Press: Clarendon Press, £5.00
ISBN 0 19 823183 0

Studies in Social Anthropology comprises a collection of essays specially written for Sir Edward Evans-Pritchard by 16 of his colleagues who had taught with him at the Institute of Social Anthropology at Oxford University during his professorship. This tribute, first conceived in 1968 as a *Festschrift* for Evans-Pritchard, regrettably has become, with his death in September, 1973, a memorial volume.

As the editors observe, and I think somewhat apologetically, there is no theme other than the fact of tribute itself to hold this series of essays together. Because the writings of Evans-Pritchard were so prolific and, not unexpected of the most humanistic of modern social anthropologists, great in breadth, most of the essays do have some relevance to his work. Although, as the editors themselves say, "in the case of some of the essays the connection is indeed so tenuous as to be scarcely perceptible."

Evans-Pritchard's *The Nuer* (1940) is the archetype for the study of unilineal descent groups and tribal political systems. Meinhard writes an essay upon patrilineality and early Teutonic kinship; Beattie discusses residence and descent in a small village in Bunyoro. Three of the articles deal with problems in political anthropology: Schlenes on the historical position of the Indian village within the national network; Burridge on the Melanesian "manager"; Peristiany on Pokot prophets. The latter essay is by far the richest and the most ambitious ethnographic piece of the volume. The majority of the remaining articles can be placed within the broad realm of religion, another area in which the contribution of Evans-Pritchard is of considerable theoretical importance. Thus we have Fortes on Tallensi prayer, Bohannan on Tiv divination, and Pocock's analysis of the book of Genesis. One is most struck in reading these essays by the variety of both topic and quality.

The most appropriate essay is by L. Dumont, his "Preface to the French edition of E. E. Evans-Pritchard's *The Nuer*". Here we have a true tribute to the work of Evans-Pritchard in that Dumont dwells upon the significant and revolutionary role it has played in the development of modern anthropological theory. It is most unfortunate that the editors of the volume and some of its contributors did not also deal more directly with the contribution of Evans-Pritchard, certainly a rich enough topic and one which would have given continuity to a volume that is in the end composed mainly of small ethnographic pieces suitable for (disparate) specialist interests.

Jeremy Cowan, Keele

A necessary condition for peace

The Israeli Army
by Edward Littwak and Dan Horowitz
Allen Lane, £6.00
ISBN 0 7139 0229 8

Si vis pacem, para bellum: the present has not brought Israel peace, but only her armed forces have saved her from destruction. Zahal, the Israeli Defence Forces (IDF) is unique among the world's fighting armies; it is the nearest approach to the nation-in-arms that has been or is likely to be seen. This tiny state, whose Jewish population is somewhat less than the population of Greater Manchester, fields an army of 250,000 men and in 1973 put into battle the third largest tank force and the sixth largest air force in the western world. Though lacking natural resources it is the world's largest armaments producer after Sweden and the great powers. Not only has it produced its own guided missiles and missile boats which proved superior to the Russian Styx class vessels but it has just put into the air a supersonic jet fighter of its own design. By military, sociological, or political standards the Israeli Defence Forces are an extraordinary phenomenon and it is most surprising that it should have taken until now for a full-length study to appear. The joint authors filled for their task. Littwak is a military analyst, a consultant on Middle East affairs and an academic; Horowitz, with an international reputation as a sociologist and political scientist, is also a reserve captain of Zahal, and has fought in three of its campaigns including the last. Together, the authors bring a sociological as well as a military perspective to their theme and this is essential since IDF is neither more nor less than the entire nation arrayed and organized for battle. They have produced a first rate book which is rich in information, sober in judgment, and analytical in temper.

The book follows loosely chronological lines but it is not a narrative nor a campaign history—the campaign studies are there to illustrate the actual practice of military doctrine. It is, instead, a genetic and analytical account of the war doctrine and social structure of the IDF, from its pre-state beginnings under the Mandate to the close of the Yom Kippur War.

In Israel's present perilous state of affairs there may be a tendency to concentrate on the last chapter, which deals with the 1973 war. This would be a mistake, the more so since the shortcomings of Israeli war doctrine, in that war, have already been dealt with by numerous commentators. The interest lies in the explication of how the format and lean intellectual appraisal of ways to meet apparently insoluble problems of defence with a tiny population and highly irregular indented frontiers which invite armed incursions in the presence of overwhelming Arab manpower and irreconcilable hostility. The solution of total national service in which all able-bodied men serve long enough in the army and then in its reserves to act as front line troops in the hour of invasion (which is still the format) did not reflect the militarism of a trigger-happy population but a dire necessity forced on them by their situation. As the code words for mobilization go out over the radio men leave the fields, factories and offices for their depots, as fully trained soldiers on their way to the front. Allen's remark that the Israeli civilian is "a soldier in mufti for eleven months of the year" is entirely exact.

As the balance of forces changed, as enemy weaponry became more sophisticated and the apparently bottomless well of Russian armaments spoiled to the Arabs, so the weaponry, the organization and the war doctrine of the Israeli Army also adapted itself. At the same time alas, the social and economic costs escalated. *The Israeli Army* traces both these developments with great skill.

The social impact of the IDF is immense; it is the most important society. In its ranks, every rank, class and colour of Israeli shares the common experience. Officers are commissioned only from the ranks. With the exception of pilots, they all share a common training course. After military service they come together again in their reserve units. There is no Military Academy, no officer caste, and it would be entirely wrong to talk of the interpenetration of civilian and military "circles" because there is only an interpenetration of roles. The armed forces are a cross-section, bodily, culturally and politically of the entire society.

But the economic and social cost of this central institution is also vast. Into the army go the best brains and administrative skills of society leaving the commercial and administrative areas relatively impoverished (though not the academic, where there is almost perfect transferability between the two). But, as the Israelis see it, *din beera*: "there is no alternative". The army can repel and temporarily disarm its enemies, but even so, they still remain in being and they still remain enemies. The Israeli Army is a necessary condition for peace but not a sufficient one. So it is that the Israelis fulfil the saying of one of their famous Rabbis: "It is not thy duty to complete the task; but neither art thou free to desist from it."

S. E. Finer

Treaty data bank

What began as the Treaty Project in 1963 in Washington University as an attempt to provide a primitive treaty data bank has, 12 years later, resulted in five massive volumes entitled the *World Treaty Index*. Treaties are hard to find and poorly indexed, yet many people in international law and sociology need access to them. It is the main purpose of this index to widen the focus of treaty research from the national to the international arena, and by making world-wide treaty information easily available the index aims at encouraging new research on treaties, international law and international politics.

It is the first treaty index with unlimited scope for study of post-1920 treaties; all countries, all topics and all published sources are covered. Volume one is the first chronological section of the League of Nations treaty series; volume two is the United Nations treaty series, series 1, numbers 1-6485 volume three contains the United Nations treaty series, series 1, numbers 6486-10641 and series 2, numbers 1-657 and the National Treaty Collections; volume four contains the chronological section, party section, international organization section and UNTS self-index section; volume five is the topic section. A sixth volume will be published in the autumn of this year on treaty profiles; the six-volume set costs £157.50 from the European Bibliographical Centre—Clio Press,

ass university paperbacks

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Bethwell A. Ogot (Ed.)
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BOOKS

Failures in fluency

German Language Attainment: A Sample Survey of Universities and Colleges in the UK
by B. Gomes de Costa, T. M. F. Smith and D. Whiteley
Julius Groos Verlag
ISBN 3 87276 152 8

According to a statement from the Department of Education, foreign language education in Great Britain should aim to "produce not only a limited number of language specialists but also a large number of people in various occupations with fluent working command of at least one foreign language". But according to the evidence from this intensive empirical study performed by two foreign language teachers (Gomes de Costa and Whiteley) and a statistician (Smith), this goal is not being attained, not even with respect to language specialists, let alone people in various occupations.

The authors collected test and questionnaire data in 1970 from a sample of 166 final-year degree candidates in German at ten higher education institutions in England and Wales. They feel that despite somewhat disappointing response rates, the sample is reasonably representative of the approximately 1,000 such candidates that might have been available. They also believe that their conclusions can be generalized beyond the specific language involved in the study, but this will remain open to question until comparable studies are done for other languages.

The investigation was in many ways modelled after one that I conducted in the United States around 1967, covering about 2,800 students majoring in one of five different languages in 203 institutions. Since the same tests of foreign language aptitude and of German language proficiency were used, some direct comparisons of results could be made. Actually, the British sample on the average performed better on the proficiency tests than their American counterparts. Even so, the level of performance did not measure up to the standard of "full professional competence" as defined by the test scores. Only 7 per cent of the sample were at this level on the test of speaking ability, the test that the authors suggest was the best indicator of true level of attainment in German. Only 43 per cent were at this level on a test of understanding of the spoken language.

As the authors state, these statistical results must be treated with caution. While the German proficiency tests on which the results were based have a fairly high degree of reliability and validity, and were probably the best available for the authors' purposes, it is debatable whether they accurately measure precisely the skills that are the objective of German language instruction. Except for the speaking test, they are of the multiple-choice, "objective" type, and the test of writing ability is more a test of grammatical knowledge than of anything like creative writing competence.

The authors used the assignments of "absolute levels of competence" that were worked out for the American study, but these assignments are fraught with technical problems that make it hard to decide whether true competence levels were underestimated or overestimated. Possibly they were overestimated, and if so, the results of this survey are even more disturbing than the report suggests. On the other hand, 61 per cent of the sample attained "full professional competence" in reading ability, and 68 per cent in writing. There is some evidence that native speakers of German do little better, partly because of the literary nature of some of the test materials.

However the results may be interpreted, any widespread failure of university-level students to attain a reasonably high level of competence deserves serious attention. One of the objectives of the study was to determine what factors may account for variations in student performance. While caution must be observed in drawing any inference of causality, the amount of time that the student had spent in a German-speaking country was found to be one of the more important factors. Another was the amount of emphasis that had been laid, in language courses, on oral-aural skills. The age at which the student had started the study of German made practically no significant difference; nor did the type of institution in which he was enrolled.

The authors make wise and interesting suggestions about how foreign language instruction could be improved so that the officially announced aims may be achieved. They note the great disparity that often exists between students' aims and those implied in the conduct of instructional programmes. They rightly complain about policies whereby students who could safely most from study abroad are often precluded from having it.

Despite the difficulties and limitations in this type of statistical, test-based study, the "hard data" it offers is a relief from the armchair speculation with which the field of foreign language education is rife.

John B. Carroll

Left and right stalemate

From Bassermann to Bebel
by Beverly Heckart
Yale University Press, £8.75
ISBN 0 300 01747 2

One is grateful to Professor Heckart for making Friedrich Meinecke alive to a new generation. Meinecke lived through the whole Bismarckian period, the Wilhelmine period, the Weimar Republic and the Third Reich. In *Die deutsche Katastrophe* he wrote a unique commentary upon the tragic political history of his lifetime. He believed, as Friedrich Naumann had before him, that a real party of the Left, including Social Democrats, Left Liberals and National Liberals could have given a healthier political development to Germany. Professor Heckart narrates its political history from 1900 to 1914 in terms of the rise, near-success and final failure of this coalition from August Bebel of the Social Democratic Party to Ernst Bassermann of the National Liberal Party.

He first describes the SPD. By 1900 the Social Democrats were parliamentarians and no longer revolutionaries. They shared many of the attitudes of the Left Liberals, but since the radicals among them won the victory at the Party Congress of 1903, they did not at this date seek a political alliance with them. On their side, the Left Liberals in 1905 made a new party programme to help them both to exploit possibilities of alliance with the Social Democrats and to unify themselves. As for the National Liberals, by 1906 Bassermann's leadership and the influence of the Young Liberals within the Party had drawn them leftwards too. Then came the turning point of January 1907. This was the date when Bülow dissolved the Reichstag and ran the general elections which followed as a crusade against the Centre Party, the main element in the government coalition for more than a decade. Yet once again (as in 1879 or 1887), the Centre responded with a shift in the balance of opinion in the electorate with a shift in the coalition with whose support it carried its proposals through the Reichstag and so reform was once more postponed. The Bülow Block—Conservatives, National Liberals and Left Liberals—lasted until 1909. Professor Heckart can show that, during their life as a government, party factors were at work upon the Left Liberals both to promote unity among themselves and eventual cooperation with the SPD. When parliamentary conflict over tax reform ended the Bülow Block, it proved a fortunate subject on which to break, since it drew the National Liberals leftwards away from the Conservatives. So by 1910, when the Left Liberals actually achieved unity among themselves in the *Fortschrittliche Volkspartei*, the prospects of a Left Block could hardly have been better.

Professor Heckart has so far covered fairly familiar subjects. He breaks new ground when he uses south German politics to show developments, which later influenced Reich politics, beginning at the local level. Prominent in this discussion is the personality of Ludwig Frank. He was important because he led the Badenese socialists out of the wilderness of revolutionary isolation into political participation and, with the backing of the Württemberg and Bavarian socialist parties, influenced the SPD as a whole in the same direction. Meanwhile in Baden itself, as a result of Frank's policy, a union of the Left—the Grand Block—was actually achieved. It gave an object lesson to the Reichstag parties in what could be done by a consolidated Left. Thus one of the questions that the general elections of 1912 would decide was whether a national Grand Block on the model of that of Baden would be created or, alternatively, whether the Government's *Sammlungspolitik* — the policy of consolidation on the Right—would triumph. The election results meant a Reichstag into being, however, in which consolidation on the Right and on the Left were almost equally practicable. The events of the next two years, unfortunately, did not decide between them.

It was clear that a Left Block could have exacted its full programme of social and political reform, including a Reich Ministry responsible to the Reichstag. It was also clear that the National Liberal Party could determine whether it ever came into being, let alone lasted. Unhappily for the National Liberals went left on two crucial questions but right on one other. Thus the coalition from Bassermann to Bebel never happened and the stultifying manoeuvres continued. Germany was never committed to open battle and clear settlement, but to continued frustration and to tension, only half concealed.

Professor Heckart offers us a political pattern that makes sense of the myriad details of government and Reichstag manoeuvres in this period. Readers who wish for politics to come alive in terms of human characters and human problems will not perhaps be satisfied. Nor will those who ask questions about party membership or programmes find much satisfaction in this book, but they are catered for by others.

Agatha Ramm

This week's reviewers

S. B. Saul is professor of economic history at Edinburgh University and dean of the faculty of social sciences. He is the author with Alan Maynard of the first two volumes of "The Economic Development of Continental Europe".

Professor Norman MacKenzie is director of the school of education at Sussex University and is writing, with his wife, a book on the first Fabians.

Patrick Parrinder lectures in English at the University of Reading.

John B. Carroll is Kenan professor of psychology and director of the L. L. Thurstone psychometric laboratory at the University of North Carolina.

H. M. Waldron is professor of German at University College, Swansea, and author of "The Modern German Novel 1945-1965".

F. W. J. Hemmings is professor of French literature at Leicester University and author of "Emile Zola" and "Culture and Society in France 1848-1898".

A. D. Jenkins is professor of polymer science at the University of Sussex and has written a book on the subject.

Roger Morgan is professor of European institutions at Loughborough University of Technology.

Henry Pelling is assistant director of research in the faculty of history at Cambridge. He has written a biography of Winston Churchill and on Britain and the Second World War.

Middle class poetry

A Literary History of Germany: The Nineteenth Century 1830-1890
by G. Wallis Field
Benn, £3.25 and £2.50
ISBN 0 510 32308 1 and 32318 9

Roles and Relationships in Otto Ludwig's Narrative Fiction
by David Turner
University of Hull, £2.00
ISBN 90048097 1

Professor Field's account of German literature during the period 1830-1890 has been planned as one of a series of eight volumes tracing the history of imaginative writing in Germany; there are to be six volumes devoted to the earlier periods, and a final volume is to cover the years 1890-1945. The editorial aim for the series is "to try to capture the spirit and literary genius of a given period through a selection of typical and outstanding texts and by the extensive use of quotations".

Professor Field has given a cautious, sober and sympathetic introduction to the period 1830-1890, and has packed a considerable amount of information into 184 pages of text. The opening chapter surveys the historical background up to 1848, and includes "philosophical currents". It is followed by four chapters on literature, after which chapter six offers a historical summary of the period 1848-1890, accompanied by references to bibliography. Chapters seven to ten deal mainly with literature of the second half of the century; there is a concluding section, a bibliography and an index.

In presenting the literary material, Professor Field has usually kept the genres in separate chapters. This leads to certain awkwardnesses; the prose of Mörike, Droste-Hülshoff, Keller, Storm and Meyer is discussed in different places from their lyrical poetry. However, the account of drama in the nineteenth century can conveniently sum up its material in one substantial chapter. Grillparzer and Hebbel are shown as "the representative dramatists of the nineteenth century", while Büchner and Grabbe receive emphasis as exponents of oppositional attitudes in drama.

In introducing prose fiction the author mainly concentrates on those works which are likely to be encountered in the first place by the non-German student. Thus Gotthelf is represented primarily by *Die schwarze Spinne* and *Hans Joggeli der Erbvetter*, Stifter, Keller and Raabe, and Storm and Meyer, as far as their prose writing is concerned, are portrayed in a sizeable chapter, "Poetic Realists in Prose". Professor Field's conspectus culminates in an appraisal of Fontane, where he singles out *Irrungen, Wirrungen*, *Effi Briest* and *Der Stechlin*.

The author's approach allows him to introduce examples of lyric poetry with directness and warmth. After the chapter on "Eichendorff, Heine and *Das junge Deutschland*" representative poets of the earlier part of the period are reviewed; in the second section of the book there is a separate chapter on Nietzsche, with some emphasis on poems, and a further section on "Lyric Poetry from Poetic Realism to Impressionism and Symbolism".

Professor Field sees the trend of poetic realism as predominant in these sixty years of German literature and as "the literary reflection of the relatively stable social and political structure of the increasingly prosperous middle class or *Bürgertum*". He notes the presence of protesting or revolutionary elements in major authors who were more concerned with the preservation of traditional values. Büchner, Grabbe and Heine anticipate styles of drama and verse associated with Brecht and some of his successors in the twentieth-century German writing for the stage. However, Professor Field describes his purpose as being "to make a case for renewed interest in conservative writers who may have suffered unduly from over-emphasis on the relevance of the 'revolutionary' current"; in this context he mentions the names of Gotthelf, Keller, Stifter, Grillparzer and Hebbel, as authors whose work merits renewed attention and would benefit from such reconsideration.

David Turner gives an appreciation of four prose works in his study of Otto Ludwig's narrative writing. The appraisal is issued as one of a series of *Occasional Papers in Modern Languages*, published by the University of Hull. In introducing specific works of an author closely associated with German nineteenth century realism, Turner points out that "an essentially private world is depicted" and the family relationships in particular furnish the focal point for the examination of psychological and moral issues; Ludwig is shown as a convinced defender of marriage, although in his own lives marital relationships are seldom serene. His principal characters develop, however, towards maturity and self-discovery usually after having had to revise their earlier conceptions of the action and nature of their lives. It is interesting to have the thematic and structural relationships between the four stories analysed with the careful attention which Turner gives *Zwischen Himmel und Erde* engages, not unexpectedly, as of central importance.

H. M. Waldron

Zola's masterpiece

Emile Zola: Germinal
by Colin Smethurst
Arnold, £1.80 and 90p
ISBN 01 7131 5772 0 and 5773 9

One of the very few questions that Colin Smethurst fails to pose in this dentous but lucidly written analysis is why *Germinal* is so consistently maintains its place as Zola's major masterpiece. Arguments may rage as to which is Balzac's, Stendhal's, Flaubert's "best" novel, but in Zola's case, whether one looks at university syllabuses or sales figures, there can never be any doubt that *L'Assommoir*, *La Terre*, *La Bête humaine* are the runners-up, and that *Germinal* stays well ahead of the field.

This may be a case in which the obvious answer is the right one: *Germinal* was the first work of literature in which a successful attempt was made to delineate the features of modern industrial man. It is a novel about miners, and the mining industry is possibly the oldest in the history of civilization. But it is also a novel in which Zola wanted, as he said, to "*poser la question qui sera la question la plus importante du XXe siècle*": that is, the revolt of the wage earners, and in this sense he can be regarded as modern even today.

As Smethurst points out, when in the winter of 1974 newspaper men descended on the coalfields of Britain, the conditions they reported were not strikingly dissimilar from those Zola described: more machinery in the pits, but as much dirt and danger; the end of the cottage now replaced by pithead baths; no women in the labour force—but otherwise little change: "reduced pay for miners forced to do surface work after illness . . . contracted underground miners after a shift using a plot of land to clean the coal dust from their throats, feelings of melancholy but determined resignation on the eve of a strike, and so on".

In the sixty pages at his disposal Colin Smethurst situates *Germinal* firmly in the context of the Rougon-*Macquart* cycle, describes the novel's genesis, discusses the author's own phobias and neuroses coloured his vision of man's merciless struggle with a cruel environment. Smethurst's study will be an indispensable handbook for all students—and not just undergraduate students—of Zola's work.

F. W. J. Hemmings

'SRC grant should equal industry pay'

by David Dickson

The value of Science Research Council postgraduate grants should be trebled to make them comparable with graduate salaries in industry, according to Dr Peter Clarke, principal of Robert Gordon's College of Technology in Aberdeen.

He submitted the suggestion recently in a memorandum to the science sub-committee of the House of Commons Select Committee on Science and Technology on behalf of the Committee of Principals and Directors of Central Institutions, of which he is chairman.

Dr Clarke also said that the Central Institutions are concerned that at present SRC funds are shared equally between the European Centre for Nuclear Research (CERN) in Geneva, aspects of astronomy and nuclear physics, and science and engineering.

"It appears to us that the last category should be considerably enhanced at the expense of the second, and the first category should be critically reviewed", he says.

Dr Clarke suggests that whereas at present the SRC assesses its awards in terms of expenditure, in future the prime test should be investment.

The University of Aberdeen, which has also submitted its evidence, has told the science sub-committee that university staff should devote about half their energies to research, and that this provision must be adequately safeguarded.

It also views with concern the tendency of the research councils to divert an increasing proportion of their resources into their own institutes, "often wastefully duplicating manpower and facilities."

● The unavoidable implication of the evidence from universities to the Commons Select Committee on Science and Technology was that the whole polytechnic concept was wrong, Mr Ian Lloyd, MP and chairman of the science sub-committee, said when the committee visited Edinburgh recently.

Professor P. R. Bradbury, professor of industrial science at Stirling, said there had been a lot of simplistic thinking about the development of tertiary education, especially in the proposition that most teaching should be done in polytechnics. This would result in inferior training in science because of inadequate back up.

Principal George Burnett, Heriot-Watt University, said there was no conflict between polytechnics and universities in the original idea that polytechnics would concentrate on short-term or application-oriented research. But there had been a tendency for polytechnics to reach higher.

The sub-committee heard evidence from Edinburgh, Stirling and Heriot-Watt Universities, and from the postgraduate students committee of Edinburgh Students' Representative Council. From these sources the sub-committee heard concern that research was being hindered by the short-term nature of contracts and that the research function of the universities is particularly bound to the teaching function.

Professor J. G. Cadogan, professor of chemistry at Edinburgh University, said the university's research function ensured that it did not teach the wrong things. In subjects where advances were rapid it was important to feed them back into the subject. In the later years of a university course this was particularly important.

There was agreement that the flow into postgraduate research was inadequate. Edinburgh research students spoke of lack of security in universities and in industry, and a disillusionment with the way science was going. They were unable to give the sub-committee much help with the question of the tension between academic research and social responsibility, other than to affirm their belief in university accountability.

BEC tests water on awards

by Sue Reid

The Business Education Council, established just over a year ago, is appealing for advice from educationalists, employers and students before it formulates and publishes a policy document next year.

The council, which aims to rationalize and unify the present provision of sub-degree level business education in England, Wales and Northern Ireland, hopes the open invitation for written comment on its recently published consultation document will get a wide response.

Mr John Bruce Lockhart, chairman, says he believes all BEC awards should have a dual purpose. They should be recognized and respected in their own right by students and employers as qualifications for industry, commerce, central and local government, and provide a progressive route to appropriate professional and higher qualifications.

The council is recommending three levels of award with a diploma and certificate at each level. The BEC first certificates and diplomas will be roughly equivalent to the present Certificate in Office Studies and the second level BEC certificates and diplomas similar to the Ordinary National Certificate and Diploma courses. The BEC higher certificates and diplomas will be comparable to the Higher National Diploma and Certificate courses.

It is hoped the name of a BEC award will not indicate the route, or mix of routes, of study followed by a particular student and the council says its guidelines should be attained by full time study, block release, sandwich courses or by part time study.

It also proposes to set up a number of controlled education experiments into directed private study and is considering the advantages and drawbacks of correspondence course tuition, without a face-to-face element. These, it is emphasized, are intended to complement the existing provision of business education and are intended especially for students unable to study in any other way.

The Council is aware of the number of areas which overlap with existing or potential course provision and has already started talks with the Council for National Academic Awards on the overlap between the DipHE and BEC higher awards.

Courses arranged by the Joint Committee for National Awards in Business Studies and Public Administration, the Joint Committee for National Certificates in Distribution and the National Committee for Certificates in Office Studies will become the responsibility of BEC from September this year. But it has said that although there will be changes in the future the prime consideration is that students enrolling on existing courses should not suffer during the transitional period.

It is expected that the OND and ONC courses will be phased out at some stage to make way for the similar BEC courses but again students will be protected.

Approaches have been made to Brussels in an effort to discover the European Economic Community's views on the unification of business qualifications.

Magazine for job hunters launched

A careers magazine aimed at graduates looking for jobs in industry has been launched by the Association of Scientific, Technical and Managerial Staffs.

The union, together with the National Union of Students, has sent out 7,000 copies to 700 student unions in colleges, universities and polytechnics. The magazine, called *Now*, is also being distributed to careers officers.

Trade union studies school set up

A school for trade union studies has been established at Gwent College of Higher Education, one of the first colleges of higher education to be designated by the Government.

The school will offer a one-year full-time diploma in industrial relations and trade union studies and is aimed at people who have missed previous educational opportunities. No formal entrance qualifications are required.

Last week the Queen visited Birmingham University as part of the centenary celebrations. Jane Headley traces 100 years of growth

Scientific vision of a self-made man





Sir Josiah Mason (left), founder of the college which was to grow into Birmingham University. The designs for the present buildings (right) are by Sir Aston Webb.

As Birmingham University celebrates its centenary year, the memory of Sir Josiah Mason, who started it all by founding a science college 100 years ago, dominates.

Josiah Mason was born in 1795 and began his business career as a hawker of penny cakes at the age of eight, working for seven years before he learned to read and write. He moved to the city when he was 21 and made his money manufacturing steel pens and split rings.

However, it was not how he acquired his wealth but what he did with it that made him unique. He was a visionary who recognized the importance of science teaching to meet the needs of the district.

It was this insight that prompted him to provide more than £200,000 to found Mason College at the heart of Birmingham's city centre. He laid the foundation stone on 23rd February, 1875—his eightieth birthday—"trusting that I, who have never been blessed with children of my own, may yet in these students leave behind me a truth loving and truth seeking progeny for generations to come".

But when Mason could not have foreseen that his college was to become the seed destined to grow into Birmingham University as it is today.

Mason College opened its doors on October 1st, 1880 with four science professors, five demonstrators and 93 day-students. Today Birmingham University has one of the largest research budgets of any university in the country—this year a record £3¼m with a large proportion going into scientific research.

By 1898 Mason College had been raised in status to a university college with a large court of governors drawn from the city and the midlands under the presidency of the statesman, Joseph Chamberlain. At this time there were fifteen professors in the faculty of medicine, 11 in science, six in arts and 15 lecturers and demonstrators to cater for the 1,000 or so students.

Without the power to grant its own degrees Mason University College might have become a member of the Victoria University formed by the federated colleges of Manchester, Liverpool, and Leeds. But Joseph Chamberlain had other ideas and encouraged the court of governors to establish and fund an autonomous university in Birmingham.

Thus Chamberlain set out to raise £250,000 to endow 15 additional chairs, while at the same time pursuing a bitter and strenuous political career as colonial secretary. The appeal was launched with an already promised £95,000.

The royal charter for the university was received on May 25, 1900, and by the end of that year Chamberlain's appeal fund had raised £382,000. He became chancellor of Birmingham University and Sir Oliver Lodge left his chair of physics at Liverpool to lead the new venture as its first principal.

In the early 1960s the original Mason College building in Edmund Street was closed down when arts, law and education were rehoused at Edgbaston. Sadly, the ostentatious mock thirteenth century French Gothic style red brick building, with its lofty gables and picturesque turrets, which had housed Mason College was demolished soon after to make way for a new civic library of functional concrete.

Mr Ernest Gold, CB, DSO, FRS, who studied at Mason College from 1897 to 1900 is at 94 perhaps the only surviving student to remember the building and the people it housed in its early days. He vividly recalls the dimly lit corridors, the rows of students perched on hard narrow benches, the stone stairs and iron railings. He remembers, too, the mathematics tuition he received from R. S. Heath, the first principal of Mason College and professor of mathematics, which enabled him to win a scholarship to Cambridge University.

There was very little social life for students at Mason College although Ernest Gold can recall "one of the medical students dressing up in tights and causing a sensation by marching around Birmingham to celebrate the relief of Mafeking".

The Rev S. A. Worrall, now living in Northern Ireland, has even earlier memories of Mason College. He was a laboratory assistant to the professor of botany and clearly remembers the room in which the professor of physics John Henry Poynting made history by "weighing the world" during a gravity experiment in the 1890s on cables now kept at the National Physical Laboratory, Teddington. The smell of an elephant's carcass being rotted down by the professor of zoology has also left an indelible imprint on the Reverend Worrall's memory.

One of the main events in the centenary celebrations is the Mason College Exhibition opened by the Queen last Friday. Sir Josiah's ink pot and pen nibs are on display, as are the quartz spheres used by Poynting to "weigh the world". Also included are samples of the first synthetic rubber made by Professor Sir William Tilden in 1880 at Mason College, and the first metallic uranium made at Birmingham University during the war.

The metallic uranium produced by Birmingham University chemists—working under the code name of "Tube Alloys"—was a vital ingredient of the nuclear bomb.

Physicists and mathematicians from the university working under the same code name in the United States helped to perfect the first atomic bomb that was to destroy Hiroshima.

During the past 20 years a rapid increase in the number of students at Birmingham University has been accompanied by extensive building programmes and continuing diversification of the range of studies. In 1974-75 there were 5,773 full-time undergraduates, 1,800 postgraduates and an academic staff engaged in both teaching and research of 1,114.

The Faculty of Medicine and Dentistry admits approximately 160 undergraduate medical students a year, about 30 per cent of whom are women.

The department of cancer studies, headed by Professor David Harnden, and housed in the clinical research block of the Medical School has made major inroads into the causes and nature of cancer. Financial support for the research work comes from the Cancer Research Campaign, and collaborative studies have been developed not only with laboratories in this country but also with scientists overseas, particularly in the United States.

The physics department, which has strong links with the medical school, is heavily committed to work in applied nuclear physics discovering, for example, ways and means of producing effective nuclear power. Since 1972 it has boasted a custom built radiation centre which it shares with the University of Aston in Birmingham housing a Dynamitron which can operate at up to three million volts.

"The Radiation Centre is the only one in the country doing this kind of work. The fact that its teaching programme and research facilities can be shared by both universities makes it quite unique", says John Walker, professor of applied nuclear science and director of the centre.

The department of space research is at present devoted to work with X-ray and Gamma ray astronomy. One of its most recent experiments is processing data from the satellite Ariel 5 which was launched last October off the coast of Kenya. The experiment was built by the Mullard Space Science Laboratory of University College, London. Its main objective is to measure the positions of known cosmic X-ray sources so that the stars from which the rays originated can be identified and their evolution traced.

As befits a university situated at the heart of a thriving industrial community, the faculty of science and engineering has more than 20 departments and schools and over 2,000 undergraduate students. It is one of the few British universities to have a department of engineering production; established in 1949 when the Joseph Lucas Company gave £112,000 to promote teaching and research into planning, organisation and control of industry.

Science and engineering still overshadow the arts but the balance is gradually evening out. There is a thriving department of Russian language and literature, as well as an inter-faculty, interdisciplinary Centre for Russian and East European Studies. Undergraduates can take a degree in BCom in Russian studies or BSocSc in Russian Studies. At present, all students do a three year course and spend some time during their second year in the Soviet Union to study the country at first hand. From 1976, however, a preliminary year of intensive Russian language study will be introduced for students without A-level Russian, extending the course to four years.

The centre also provides courses for about 300 undergraduates in other faculties, as well as catering for postgraduates engaged in advanced study and research projects.

The university has a well established drama department, with about 18 special honours students and 10 combined honours students admitted each year. A course in theatre studies is also offered as a subsidiary and supplementary subject for about eight students each year reading other honours courses. Practical classes and productions take place in the department's headquarters where facilities include two drama studios, a recording studio, a design room and a number of workshops.

Birmingham University today is widely diverse in its activities and operations. But it represents all that Joseph Chamberlain dreamed of when he engineered its charter at the turn of the century. In his own words: "It should be a school of instruction, aiking all knowledge in its province, a place in which those who come to teach shall continue to learn, and in which the most important work of research shall be continually carried on."

LETTERS TO THE EDITOR

Alternative prospectus

from Mr Oliver Caldecott

Sir,—Because of our recent change of address I have only just seen the letter from Mr David Carter about our publication, *The Alternative Prospectus of British Universities and Polytechnics* (*THES*, May 23). I do not wish to enter into a long defence of the book, and it would seem unnecessary to have to explain that production and research time inevitably means that such a book is always going to be based on "previous years'" information. But I do want to say two things:

1. We are very conscious that in an enterprise of this scope a number of errors of detail are bound to creep in and we are anxious to know about them so that we can make the second edition even more useful and accurate. We would therefore welcome any helpful letters correcting matters of fact.

2. We are delighted that so many "alternative" prospectuses are being prepared at British universities and polytechnics, and our book is not intended to render these unnecessary. Nevertheless to gain a picture of the whole spectrum of the degree-awarding institutions of England, Scotland, Wales and Northern Ireland would cost many pounds in postage and for this reason our *Alternative Prospectus* does give the prospective student an overview very much more cheaply and conveniently.

Your faithfully
OLIVER CALDECOTT,
King Street,
London, WC2.

from Miss Anne Shaw

Sir,—I was grieved to read in your extract from *The Alternative Prospectus* (*THES*, May 16) that Vicky Payne and Vivion Lipschitz describe *Leeds Student* as having the highest circulation of any student paper.

Sennet, the London Student Paper, has a print run of 40,000 and even while it was the newspaper of the University of London its circulation was some 18,000 which I think must be in excess of that of the Leeds publication.

Yours faithfully,
ANNE SHAW,
Secretary to the Editorial Board,
Sennet,
University of London.

Human movement

from Mr J. R. Gilchrist

Sir,—It is disappointing to see the way in which R. E. Morgan takes leave of the profession he has served so well over many years (*THES*, June 6). One wonders at the motives which lead to such sour tones of disillusion, to a response of artless reduction about the inroads being made by human movement studies into the field of physical education. Not that many human movement degrees do exist anyway, since the Council for National Academic Awards, to use one example, do not give titles, like human movement, to BEd degrees.

If it is physical educationists who are universally pressing for the proliferation of degree courses, why, one asks, is it felt necessary to demean the views of such colleagues? Would Mr Morgan care to define more specifically what he sees as human movement without the indulgent attempt at *reductio ad absurdum* with his syllabus on "coffee studies"?

Human movement is scarcely the invention of any specific group of physical educationists. It can be seen as a generic term giving cohesion to the multifaceted aspects of man in motion, humans moving, anthropokinetics, if you will. Human movement is not physical education. Physical education is one of the practical applications of human movement in an educational context.

When it is said that "human movement programmes are found to include within their scope only certain forms of human movement" this is patently not the case. It is well known that movement studies include the whole range of physical activity and include work in other disciplines, just as a study of literature requires some knowledge of other disciplines like history, philosophy, anthropology, sociology.

In this courious essay, however, limits are set quite arbitrarily upon the content of human movement. Not only does the writer circumscribe subject matter, both incorrectly and incompletely, he overcomes any feelings of restraint by going on to make judgments upon his own delimited area.

If movement is "overlarge" and an office is in good company with other overlarge, diffuse subjects like philosophy, language and literature. "What is the use of it?", Mr Morgan asks. What is the use of literature? Are subjects to be studied only with the evaluative sanctions of the University? If a body of knowledge exists I would have thought that anyone with enough interest, aptitude and ability would be free to take it up.

From Mr Morgan's wealth of experience, one hopes for a more substantial contribution to the debate.

Yours faithfully,
I. R. GILCHRIST,
Dunfermline College of Physical Education,
Edinburgh.

Exam nerves

from Mr M. B Warriss

Sir,—I was interested to read Mr Phillip Thody's article on exam nerves (*THES*, June 13). I myself have seen a student faint in mid paper. I noted the lines "examiners (except, I hope, in medicine) bear over backwards to give candidates the benefit of the doubt". Quite so. One thing worse than a mediocre surgeon is a neurotic mediocre surgeon who wept his way post his examinations into a corner of his tutor's heart.

But there are a hundred other fields where incompetence could be fatal and to more than one patient/victim at a time—engineering, pharmacy, food production.

Granted one "BSc (Jusr)" may do very little harm wherever he goes. But a large number of them devalue the qualifications of their more competent fellows. Also, the individual may not noticeably affect a large company, but if enough of them are hurled into the productive machinery, like so many tiny spanners, they will wreck it; ultimately we will starve.

There is yet one higher reason for failing the borderline student—the duty to that student himself. The right to award qualifications is not the adversion to award students a lay benefice in a cloistered world. The paper merely proves that the student has the ability to learn, by experience, ever more, and to work on progressively harder tasks.

Rather than qualify the limited student for a job which he cannot quite do, the sooner he is gently but firmly made aware of those limitations, the better for all concerned—most of all, him.

Yours faithfully,
M. B. WARRISS,
Department of Accounting,
Bristol Polytechnic.

Poly rapport

from Dr Ian Reekie

Sir,—Recently there has been evidence of some misunderstanding between polytechnic and university lecturers. This has been amply demonstrated in the columns of your paper. Such misunderstanding inevitably leads to elements of irrationality in the polytechnic versus university debate, a debate in which it is important that truth emerges.

Perhaps a contributing factor in this misunderstanding is that while polytechnic lecturers have had direct experience of the university sector as students, postgraduates or staff, the converse is much less frequently so. It is arguable, therefore, that polytechnic lecturers know more about the university sector than the university lecturers know about the polytechnic sector.

In order as far as is conceivable this one-sided situation the powers that be should consider setting up a scheme of visiting university lectureships within the polytechnics. This can only improve the quality of the debate. The better the rapport that exists between the two types of institution, the better equipped higher education will be to cope with the increasingly tighter economic constraints which surround it.

Yours faithfully,
IAN REEKIE,
Principal,
Newcastle upon Tyne Polytechnic.

Definitions of HE

from Dr A. J. Pointon

Sir,—It was with much pleasure that I read the article by Lord Alexander (*THES*, June 20) "Towards a better definition of higher education". That Lord Alexander has long appreciated the need to recognize a difference in requirement and activity as between further education and higher education, between craft college and polytechnic, is well known. However, it is necessary at one point to disagree with his statement and, at another, to question the validity of his hopes.

He states, regarding recent debates on higher education, "nobody seems to have thought it necessary to define higher education". Such is not the case. First, the setting up of the Association of Polytechnic Teachers was a direct result of a group of teachers endeavouring to obtain recognition for their activities in a distinct sector of education in the face of opposition from other further education teachers and local authorities. (Indeed APT was only formed after repeated attempts to form a sector of the predominant further education union to deal with the needs of higher education had foundered on the rock of further education interests.)

Second, there have been discussions between APT and the Association of Teachers in Colleges and Departments of Education and between APT and the Committee of Directors of Polytechnics on the definition of higher education. The definition which APT has accepted would differ from that of Lord Alexander only in the stress which they put on the ability of institutions to be assimilated into a system of national finance.

Third, approaches made by APT to the Association of Metropolitan Authorities, the Association of County Councils and the Inner London Education Authority have elicited no response on this subject save, in one case, the claim that no distinction (let alone definition) of higher education was recognized.

Fourth, the Department of Education and Science has stated that, even without the inclusion of the colleges of education, there are some 56 institutions which must be classed as having more than 40 per cent of work in higher education and that, therefore, no distinction between polytechnics and further education could be recognized. (However, since the 30 polytechnics accounted for 95.5 per cent of all CNAA degrees in the local authority sector, this statement seems to beg clarification.)

The hopes which Lord Alexander apparently has that the definition and recognition of a higher education sector might be acceptable to either FE teachers or to local authorities are, on the basis of past experience, likely to be doomed to disappointment. He has only to read the account of the pay negotiations in the Burnham FE Committee to realize that polytechnic and other higher education teachers (who have been defined by the Houghton report as those teaching work in the categories classed as I-III) were seen as a means of subsidising FE teachers for the fourth time in the past five years. He cannot imagine that the bargaining power given to the whole FE sector by the claim of the polytechnics for parity with the universities will be readily given up.

Similarly, Lord Alexander must know the views of the local authorities as well as anyone. Suffice it to remind him of the fight which is being waged by both colleges of education and polytechnics to avoid having thrust upon them the conditions of service negotiated by the Council of Local Education Authority as if there was no such thing as a polytechnic, let alone a distinct sector of higher education.

Nothwithstanding these comments it must be said that the views of Lord Alexander are a welcome ray of light on an obscure situation in which the very obscurity is being used to the detriment of public sector higher education.

Yours sincerely,
A. J. POINTON,
Assistant national secretary,
Association of Polytechnic Teachers,
Southsea,
Hants.

Bogus degrees

from the Rev R. Peters

Sir,—Among the many who will be grateful for your investigation of "bogus" colleges and qualifications (*THES*, June 13) are the trustees and principals of small specialist colleges. Because of their size and the relatively limited nature of their work it is all too easy for such institutions to be classed as "a bit odd".

Here, in common with most colleges which can be grouped under the general description of "bible colleges" we provide a course of study for a college certificate (designed to be covered in two years of full-time study or proportionately longer part-time) for those students who for one reason or another are not taking examinations leading to an "external" or "extra-mural" award of the University of London. The syllabus is thorough and we have secured scholars of great eminence as examiners. Nevertheless, the existence of the kind of institution you have very properly "blown up" can lead to serious misunderstandings concerning the standing and efficiency of colleges such as this.

The DES could do much to help small institutions which are also registered as educational charities if it could reconsider its regulation not to "inspect" colleges with fewer than 50 full-time students. We have tried to obtain inspectorial visits on two occasions, just after the college opened and again last year, only to be told that an inspection cannot be made until we have the requisite number of 50 full-time students. As we cannot accommodate that number does this mean that we are to be "outsiders" for ever, and so liable to be lumped with the places mentioned in your lovestigation?

Yours faithfully,
R. PETERS,
Principal,
St Aidan's College,
Broseley,
Shropshire.

The Commission of the European Communities

is organising an open competition on the basis of tests to draw up a reserve list of

Assistant Translators

of Danish, Dutch, English, French, German and Italian language

—to translate texts of a legal, economic, administrative and technical nature.

Place of employment: BRUSSELS or LUXEMBOURG

Candidates (maximum age—32) must:

- have completed a university course and obtained a degree;
- have certain appropriate experience;
- have a perfect knowledge of one of the official languages of the Communities (Danish, Dutch, English, French, German and Italian) and an extensive knowledge of two other of these languages.

Basic annual salary range: from £4704—£5962.

Full details and the OBLIGATORY OFFICIAL APPLICATION FORM are contained in the Official Journal of the European Communities No. C/149 dated 4/7/75 which can be obtained after 7/7/75 from:

a) E. E. C. Information Office, 20 Kensington Palace Gardens, London W8 4QQ.

b) Commission of the European Communities Recruiting, Appointments, Promotions Division, 200 rue de la Loi, 1049 Brussels (Belgium).

c) H. M. Stationery Office, P.O. Box 569, London S.E.1 at a price of 21p. Please give number of the Journal.

Closing date for receipt of completed applications: 14/8/75.

Classified Advertisements

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Universities

UNIVERSITY OF THE SOUTH PACIFIC

Applications are invited for the following positions which are available from February 1976 in the School of Education:

PROFESSOR OF EDUCATION (CURRICULUM STUDIES)

The appointee, who should have substantial experience and research interests in secondary school curriculum development, will be responsible for developing courses in the theory and practice of Curriculum Development in the programmes of study for diplomas and degrees currently offered by the School of Education, and for mounting the Curriculum Development component in the two-year Bachelor of Education programme which the University introduced in 1975. In addition he will be expected to initiate and encourage research in the field of Curriculum Development relevant to the developing educational systems of the South Pacific.

An important aspect of his work will be the organisation and development of the University's capacity to participate actively and effectively in the reform of regional school curricula through the establishment of a Curriculum Studies Unit in the School of Education. The UNDP/UNESCO Secondary Curriculum Development Project, which is currently operating from the School of Education, is expected to complete its work on the revision of Form I to IV curricula at the end of 1975. The appointee's task will be to ensure that the relationships which exist between the UNDP unit and regional curriculum units are maintained, and that the University takes a leading role in preparing regional personnel who can participate in curriculum reform in their own countries.

Preference may be given to applicants with experience in a developing country or a multiracial setting.

LECTURER/ASSISTANT LECTURER IN MATHEMATICS

The appointee will participate in the instruction of the undergraduate level Mathematics programme offered by the School of Education to students enrolled in all three Schools of the University.

This programme includes service courses in Mathematical Methods and Inferential Statistics at the first year level, and advanced course work of a general nature at the second year level leading to specialised study in Computer and Numerical Mathematics, Fluid Dynamics, Mathematical Statistics and Pure Mathematics in the third.

Participation will also be expected in the consultation service provided by the Mathematics staff, principally in Data Processing and Statistics. Qualifications and experience in either of these fields is desirable. Every encouragement will be provided for the appointee to undertake research in any branch of Mathematics.

Salary Scales: Professor F11,884-$F12,884 per annum; Lecturer $F5,852-$F7,252 per annum. Assistant Lecturer $F4,494-$F5,539 per annum (£1 sterling = $F2.84). The British Government may supplement salaries in range $3000-$4250 per annum (sterling) for married appointees (normally free of all tax) and provide children's education allowances and holiday visit passages. This supplementation is unlikely to apply to single appointees or to married appointees at Assistant Lecturer level. These rates are under review, new rates, with increases of at least 24 per cent, will apply from 1 April 1975. Superannuation scheme: 10 per cent gratuity for contract appointments; partly furnished accommodation at rental of 15 per cent of salary.

Detailed applications (six copies) including a curriculum vitae, a recent small photograph and naming 3 referees should be sent by 23 July 1975, to the Registrar, University of the South Pacific, P.O. Box 1168, Suva, Fiji. Further particulars are available from this address.

Aarhus University, Denmark

Visiting Professor in English and Related Studies

There will be a vacancy for visiting professors for the three years commencing 1st September, 1976. Initially, applications are invited for two posts, one for the Autumn term 1976 (1st September-31st December), one for the Spring term (1st February-1st June, 1977). The following fields will have particular interest:

English literature (post-mediaeval) or
English language and linguistics or
American literature or
Commonwealth literature.

Duties will include teaching three weekly undergraduate courses, a lecture-course (a wide choice of subject will be allowed), participation in the general work of the department, etc.

Applicants should possess high research qualifications, a range of published work and wide teaching experience. Salary in the region of £1,200 per month. (Income tax for UK nationals according to UK rates.)

Applications, including full curriculum vitae and the names of three referees, should be sent to:

Professor Donald Hannah, M.A., Ph.D., Department of English, The University, 8000 Aarhus C, Denmark, not later than October 1st, 1975.

SAUDI ARABIA

MEDICAL FACULTY

UNIVERSITY OF RIYADH

PRE-MEDICAL AND PRE-CLINICAL SUBJECTS

The Medical College of the University of Riyadh has an intake of about 100 students annually. Women students, accepted for the first time in the academic year 1974/75, comprise a little over one third of the annual intake. For the time being, men and women students receive their pre-medical and pre-clinical instruction in segregated classes. The language of instruction is English.

Applications are invited to fill posts to afford separate instruction to men and women students in the following pre-medical and pre-clinical subjects:

CHEMISTRY
Assistant Professors
(2 posts)

PHYSICS
Assistant Professors
(2 posts)

PHYSICS
Associate Professors
(2 posts)

Applicants for Professorial posts should have not less than 10 years' experience of teaching at University level, while those for posts as Associate Professors should have not less than 5 years' teaching experience at University level.

Applicants for posts of Assistant Professor should be in possession of a Doctorate and have had some teaching experience at University level.

Monthly Salary Scales in Saudi Riyals (£1=approximately SR8.4) are as follows:

Professors:	6,000×200-6,600
Associate Professors:	4,800×200-5,800
Assistant Professors:	3,600×200-4,600

Annual Housing Allowance:
Professors—SR20,000; Associate Professors—17,000; Assistant Professors—15,000.

Instalment Allowance (given once only on first appointment) is 50% of enrolled housing allowance.

Professional Allowance.—Medical graduates not involved in bedside care of patients are entitled to a professional allowance as follows: Professors—10% of salary; Associate Professor—15% of salary; and Assistant Professor —20% of salary.

Gratuity.—After 2 years of service a gratuity at the rate of half a month's salary for each year of service. From the 6th year of service onwards the gratuity is at the rate of 1 month's salary per year of service, dating from commencement of service with the University of Riyadh. The rate will be based on the last salary attained before separation, and will be applied to all the years served.

Taxation.—Salaries, allowances and gratuities are NOT subject to income tax. Currency is Saudi Arabia is freely convertible and there are no restrictions on its transfer.

Annual leave passages:
Appointments for 1 year or longer; renewable. Secondments considered.

Detailed applications (3 copies), including a curriculum vitae and the names of three referees, to be sent as soon as possible, to Inter-University Council, 90-91 Tottenham Court Road, London W1P 0DT, from whom further particulars will be available.

Applicants will be required to agree to the curriculum vitae submitted being circulated to the referees he/she has named.

UNIVERSITY OF DAR ES SALAAM TANZANIA

Applications are invited for the following posts in the

ECONOMIC RESEARCH BUREAU:

ASSOCIATE PROFESSOR/SENIOR RESEARCH FELLOW

Applicants should be holders of PhD in Industrial Economics or Commerce with a bias towards taxation systems. Experience in teaching, research or taxation administration will be an advantage. MA/MSc candidates with experience in taxation of over four years may also be considered.

The appointee is expected to carry out a review, evaluation and an appraisal of the Taxation System of Tanzania, particularly as it affects industrial and commercial expansion. In addition he/she will assist in training junior staff in the Economic Research Bureau.

SENIOR RESEARCH FELLOW/RESEARCH FELLOW

Applicants should preferably be PhD holders, or have an MA or MSc in (a) Agricultural Economics with a bias towards capital investment in agriculture, or (b) Commerce and/or Industrial economics, with a bias towards business organization and performance. The appointee is expected to carry out an analysis of capital investment in agriculture with the view of establishing appropriate guidelines of how procedures on National Accounting can be modified to suit and cultivate Agricultural development.

RESEARCH FELLOW/ASSISTANT RESEARCH FELLOW

Preferably an MA or MSc holder, a BA and BSc in Economics with three to four years experience will also be considered. Applicants should be conversant with pricing theory and pricing policies of agricultural commodities.

The appointee is required to carry out research on the long term effects of long term Para-territorial Produce prices of major agricultural commodities.

Salary scales: Associate Professor £23,052-£23,472 p.a. Senior Research Fellow £22,652-£23,052 p.a. Research Fellow £12,190-£12,570 p.a. Assistant Research Fellow £11,449-£12,171 p.a. (£1=£1.18 sterling). The British Government may supplement salaries in range £1,590-£2,820 p.a. (sterling) for married appointees or £750-£1,872 p.a. (sterling) for single appointees (normally free of all tax) and provide children's education allowances and holiday visit passages (FSSU). Family passages; biennial overseas leave.

Detailed applications (2 copies), including a curriculum vitae and naming 3 referees, should be sent by air mail, not later than 23rd July, 1975, to the Chief Academic Officer, University of Dar es Salaam, PO Box 35091, Dar es Salaam, Tanzania. Applicants resident in UK should also send 1 copy to Inter-University Council, 90-91 Tottenham Court Road, London, W1P 0DT. Further particulars may be obtained from either address.

ULSTER THE NEW UNIVERSITY

The Contribution of Voluntary Organisations to Social Welfare in Northern Ireland

Applications are invited for the post of Research Fellow (tenable immediately) to undertake a two-year research project under the direction of Professor Hywel Griffiths.

The project will evaluate the part played by voluntary organisations in the meeting of social needs and will seek to determine the extent and the significance of the contribution of voluntary agencies to social welfare provision.

Candidates for the post should have related research experience and should also have some knowledge of social policy and social service delivery systems. Familiarity with the work of voluntary organisations and some experience of methods of organisational analysis would be an advantage.

Salary (excluding Threshold payments) (with FSSU/USS):

Negotiable but not less than £2,110 per annum.

Further details should be obtained from The Registrar, The New University of Ulster, Coleraine, Northern Ireland (quoting Ref: 38/35) to whom applications, including the names and addresses of two referees, should be sent not later than 14th July, 1975.

BIRMINGHAM THE UNIVERSITY

FACULTY OF COMMERCE AND SOCIAL SCIENCE

DEPARTMENT OF ECONOMIC THEORY AND ECONOMETRICS

SCHOOL OF QUANTITATIVE ECONOMICS

Applications are invited for a Senior Lectureship or Lectureship (Grade II) in Economics tenable from 1st October, 1975.

The person appointed will be expected to participate in the teaching and research programmes of the Department of Economic Theory and Econometrics and the School of Quantitative Economics. Candidates should be interested in developing economic models for planning and have had a Ph.D. training in economic theory involving specialisation in Mathematical Economics, Econometrics, Statistics or Operational Research.

Salary: £2,358 to £3,826 (Senior Lectureship) or £1,758 to £2,826 (Lectureship) according to qualifications and experience.

Applications (three copies) naming three referees by 14th July, 1975, to Assistant Registrar (C), University of Birmingham, P.O. Box 363, Birmingham B15 2TT, from whom further particulars may be obtained.

BIRMINGHAM THE UNIVERSITY

DEPARTMENT OF RUSSIAN AND SLAVONIC STUDIES/DEPARTMENT OF RUSSIAN LANGUAGE AND LITERATURE

Applications are invited for a LECTURERSHIP IN RUSSIAN tenable from 1st October, 1975.

The person appointed will be expected to lecture on Soviet literature and culture including the social aspects of these subjects and to participate in the Russian language teaching in both the Combined Honours Department and the Department of Russian.

Salary up to sixth point in Lecturer scale: £3,118 to £4,586 per annum (under review) plus threshold and superannuation.

Applications (three copies) naming three referees by 14th July, 1975, to Assistant Registrar (C), University of Birmingham, P.O. Box 363, Birmingham B15 2TT, from whom further particulars may be obtained.

Universities continued

KELVIN GROVE COLLEGE OF ADVANCED EDUCATION

Kelvin Grove College of Advanced Education is an autonomous College specializing in the preparation of Primary, Pre-School and Secondary teachers. In addition it offers a wide range of in-service courses for teachers which will include a four-year degree programme from 1976

LECTURER/SENIOR LECTURER IN EDUCATION

Ref. No. 75/A/50

Several vacancies will occur from January, 1976, in such areas as:

Sociology of Education
Philosophy & History of Education
Curriculum Theory & Instruction
Development of Teacher Competencies through Micro-Teaching and Simulation Techniques

Applicants should have a strong background in one or more of the above areas together with appropriate academic qualifications and a record of successful teaching experience

LECTURER/SENIOR LECTURER IN PSYCHOLOGY

Ref. No. 75/A/51

Applications are invited for vacancies occurring in each of the following areas:

Social Psychology (Human relations, community psychology, environmental psychology)
Educational Psychology/Introductory General Psychology
Developmental Psychology (child development, especially perceptuo-motor development, adolescent development)
Special Education (learning problems of adolescents, learning disabilities, mental retardation)

Applicants should have a strong background in one or more of the fields specified together with appropriate academic qualifications and teaching experience.

SENIOR LECTURER IN ORAL COMMUNICATION & DRAMA

Ref. No. 75/A/52

Applicants should possess an advanced degree in theatre, drama or oral communication, and have had extensive experience in educational drama and teaching of oral expression skills and/or professional theatre organization. The appointee would be expected to promote drama and oral activities within the community in association with the College, as well as develop new approaches within the College programme.

SENIOR TUTOR/LECTURER IN PHYSICAL EDUCATION

Ref. No. 75/A/53

Vacancies are expected to occur from January, 1976

Applicants should have knowledge and experience in some of the following areas:

Health Education
Adapted Physical Education
Dance. Major Games, particularly cricket, soccer, basketball, volleyball
Physical Education at the lower Primary School level
Outdoor Pursuits

Teaching experience in primary, secondary or tertiary institutions would be an advantage.

Appointments will be made within the following salary ranges in accordance with qualifications and experience.

Senior Tutor:	$10,101-$11,655	per annum (AUST)
Lecturer II:	$ 9,946-$12,846	,,
Lecturer I:	$11,665-$15,644	,,
Senior Lecturer:	$15,945-$18,544	,,

Progression beyond $14,789 in the Lecturer I range and $16,990 in the Senior Lecturer range will depend upon possession of appropriate qualifications.

Successful applicants will be expected to commence duty by 31st January, 1976.

Applications close Thursday, 31st July, 1975.

Application forms and further details are available from the Registrar, Kelvin Grove College of Advanced Education, Victoria Park Road, Kelvin Grove, Brisbane, Queensland 4059.

UNIVERSITY OF SIERRA LEONE
FOURAH BAY COLLEGE

Applications are invited for the following posts in the Department of Chemistry:

ASSOCIATE PROFESSOR INORGANIC CHEMISTRY

The appointee would be expected to give courses to general and honours degree levels in three or more of the following topics: the chemistry of Natural Products, Structural Organic Chemistry, Stereochemistry, Organic Reaction Mechanisms, Classical Organic Chemistry.

LECTURER IN PHYSICAL CHEMISTRY

The appointee would be expected to give courses to general and honours degree levels in three or more of the following areas: classical chemical kinetics, classical and statistical chemical thermodynamics, nuclear and radiochemistry, photochemistry, surface chemistry, gas kinetics and solution chemistry.

Appointees are expected to assume duties on or about 1 September, 1975. Salary scales: Associate Professor Le6,300 p.a., Lecturer Le2,910-Le5,430 p.a. (£1 sterling equals Le2). The British Government may supplement salaries in range £1,308 to £2,550 p.a. (sterling) for married appointees or £456-£1,554 p.a. (sterling) for single appointees (normally free of all tax) and provide children's education allowances and holiday visit passages. These rates are under review: new rates will apply from 1 April, 1975. F.S.S.U.; family passages; various allowances; regular overseas leave.

Detailed applications (two copies), including a curriculum vitae and naming three referees, should be sent by airmail, not later than 28 July, 1975, to the Secretary, University of Sierra Leone, Private Mail Bag, Freetown, Sierra Leone. Applicants resident in the United Kingdom should also send one copy to Inter-University Council, 90/91 Tottenham Court Road, London W1P 0DT. Further particulars may be obtained from either address.

UNIVERSITY OF DAR ES SALAAM TANZANIA

Applications are invited for the following posts in the BUREAU OF RESOURCE ASSESSMENT AND LAND USE PLANNING:

RESEARCH FELLOW IN HUMAN GEOGRAPHY

Applicants should have an interest in settlement patterns and experience in remote sensing. The appointee will assist in a research project involving evaluation of resettlements on the basis of resources availability, making recommendations about provision of services to settlements and assisting local organizations with resources and land use mapping.

SENIOR RESEARCH FELLOW/RESEARCH FELLOW IN POPULATION STUDIES

Applicants should have an M.A. or Ph.D. in Geography or Economics. The appointee will participate in the processing and analysis of a major fertility/mortality study and assist in research projects in which assessment of the demographic component has to be made in relation to education, employment, urbanization, etc. He will participate in teaching at undergraduate and post-graduate level and in in-service courses.

RESEARCH PROFESSOR/ASSOCIATE RESEARCH PROFESSOR/SENIOR RESEARCH FELLOW IN WATER RESOURCE DEVELOPMENT

Applicants should have an M.A. or Ph.D. in Geography or Economics. The appointee will be responsible for designing and carrying out impact studies on rural water supplies, analysing socio-economic aspects of irrigation, assisting in planning irrigation development and undertaking other studies in water resource development, such as urban water supply, crop water requirement, hydropower development, etc.

RESEARCH PROFESSOR/ASSOCIATE RESEARCH PROFESSOR/SENIOR RESEARCH FELLOW IN TRANSPORTATION STUDIES

Applicants should have postgraduate qualifications in either geography or economics, with a thorough grounding in the theory and research techniques of transportation and a special interest in transport planning and feeder road development in developing countries. Duties of the appointee will include undertaking research on the transportation system and socio-economic surveys in selected areas of Tanzania and providing background information for future improvements of the system, carrying out studies of specific transport projects as requested by the Tanzanian Government and assisting in the training of technical personnel connected with BRALUP's research programme.

Salary scales: Research Professor, T£3,332-T£3,662 p.a.; Associate Research Professor, T£3,052-T£3,472 p.a.; Senior Research Fellow, T£2,632-T£3,052 p.a.; Research Fellow, T£2,150-T£2,570 p.a. (T£1 equals £1.18 Sterling). The British Government may supplement salaries in range £2,130-£3,126 p.a. (Sterling) for married appointees or £1,266-£2,142 p.a. (Sterling) for single appointees (normally free of all tax) and provide children's education allowances and holiday visit passages. F.S.S.U. Family passages; biennial overseas leave.

Detailed applications (two copies), including a curriculum vitae and naming three referees, should be sent by air mail, not later than August 4, 1975, to the Chief Academic Officer, University of Dar es Salaam, P.O. Box 35091, Dar es Salaam, Tanzania. Applicants resident in U.K. should also send 1 copy to Inter-University Council, 90/91 Tottenham Court Road, London W1P 0DT. Further particulars may be obtained from either address.

SYNTEX Research Centre
INFORMATION SCIENTIST

Edinburgh C £3,500

This unit currently being established in the Research Park of Heriot-Watt University at an attractive location on the outskirts of Edinburgh is part of the multinational Syntex Corporation and will be engaged in researching new-medicinal products for human use.

This post, an integral part of the research team, will involve the identification, storage and retrieval of scientific and allied information related to the disciplines of Pharmacology/Toxicology, Pharmaceutical Science and Clinical Medicine which will be undertaken at the Centre.

University library facilities will be available but a small core library of key journals and reference books with a highly efficient indexing and retrieval system at its heart will be kept at the Centre.

The successful candidate will have a related scientific background and be sufficiently well experienced in information handling to be able to create as well as run a service function for the benefit of highly qualified scientists.

Salary is negotiable depending on experience and background: as a guide a starting figure of around £3,500 p.a. is envisaged, with non-contributory pension, free membership of BUPA (after qualifying period) and 4 weeks holidays.

Working in an atmosphere of innovation and creating new facilities and systems will be an added bonus to the right candidate. Please contact W. PRYDE, 031-225 2736. PER, 5 George Street, Edinburgh.

PER PROFESSIONAL and EXECUTIVE RECRUITMENT

BIRMINGHAM
THE UNIVERSITY OF ASTON IN BIRMINGHAM

DATA PROCESSING MANAGER (NEW POST)

Applications are invited from suitably experienced candidates for this newly-created post on the salary scale of not less than £4,001-£5,133. In addition there is a threshold allowance of £229 per annum.

The manager will be required to establish and control a new data processing unit based on an I.C.L. 2903 installation to serve the administrative needs of the University e.g., financial and management accounting, staff and student records. This post should provide an excellent opportunity for broadening experience and helping in the development of new systems of management information and control. Candidates should have had experience in systems analysis and in computer programming. Experience of University administrative procedures is not essential but would be an advantage.

Further particulars and application forms obtainable from the Staff Officer, the University of Aston in Birmingham, Gosta Green, Birmingham B4 7ET, quoting reference [illegible]

CAPE TOWN
UNIVERSITY OF

(1) SECOND CHAIR OF CLASSICS
(2) LECTURESHIP IN CLASSICS

Applications are invited for the above two posts. Appointment, according to qualifications and experience, will be made on the following salary scales: Professor R10,800 by 400 to 12,800 by 600 to 13,900; Lecturer R6,300 by 300 to R9,180 per annum.

Applicants for either post should submit a curriculum vitae, stating teaching and other relevant experience, special fields of interest and research work completed or in progress, present salary, and when available if appointed. Names and addresses of three referees should be given.

Memoranda concerning both positions and general conditions of service should be obtained from the Registrar, University of Cape Town, Private Bag, Rondebosch 7700, by whom applications must be received not later than 30th September, 1975.

Appointment will be subject to a satisfactory medical examination. The university reserves the right to appoint a person other than one of the applicants or to make no

THE UNIVERSITY OF MANCHESTER
MANCHESTER BUSINESS SCHOOL

ACADEMIC POSTS

Applications are invited for posts in Finance/Accounting, Social Sciences/Personnel Management, and Marketing. The vacancies will be filled at Lecturer or Senior Lecturer level. The Marketing post may be filled at professorial level if a suitable candidate applies.

Salary scale (under review): Lecturer: £2,118-£4,896 p.a.; Senior Lecturer: £4,707-£5,976 p.a.

Further particulars and application form (returnable by July 18th 1975), from the Registrar, The University, Manchester, M13 9PL. Quote ref: 139/75/THES.

DIRECTOR OF STUDIES/ MANAGEMENT COURSE

Applications are invited for the above post. Candidate should have experience of management development or of post-experience education, and be well qualified in a subject or subjects relevant to management. The appointment will be for three years. The successful candidate will be responsible for the 10 week management course and other, shorter posts during the courses.

Salary and terms negotiable. Letters of application, with full details of qualifications and experience, should be sent to the Director, Manchester Business School, Booth Street West, Manchester M15 6PB.

LOUGHBOROUGH UNIVERSITY OF TECHNOLOGY

LECTURESHIP IN ELECTRONICS

Applications are invited for the post of LECTURER in electronics in the Department of Electronic and Electrical Engineering. Candidates should have experience in linear and digital circuit techniques particularly using integrated circuits. Ref. 75/23EL.

LECTURESHIP IN UNDERWATER ACOUSTICS

Applications are invited for the post of LECTURER in underwater acoustics in the same Department. Candidates should have relevant experience, particularly in the field of transducer design. Ref. 75/24EL.

Several RESEARCH FELLOWSHIPS are also available within the Department. Candidates for these posts should have a higher degree or equivalent experience. Ref. 75/25EL.

Salary for lectureships in scale £2,118-£4,896; for fellowships on scale rising to £2,931. All attract threshold payments of £229.68, and are under review with new scales partially agreed. Postcard requests for further details and application forms to Assistant Registrar (Establishment) quoting appropriate reference.

Loughborough *Leicestershire*

UNIVERSITY OF BRADFORD
CHAIR IN ENVIRONMENTAL SCIENCE

Applications are invited for the Chair in Environmental Science. Commencing stipend will depend upon the qualifications and experience of the candidate but will be not less than £7,501 (under review).

Closing date for applications: 31st July, 1975.

Further particulars may be obtained from the Registrar, Post P/ES/TH, University of Bradford, Yorkshire BD7 1DP.

UNIVERSITY OF BRADFORD

MIDDLESEX
BRUNEL THE UNIVERSITY

SCHOOL OF MATHEMATICS POST-DOCTORAL RESEARCH FELLOW

Applications are invited for a post-doctoral research post tenable for two years supported by the Science Research Council. The investigation relates to moving boundary problems in heat flow and diffusion. Candidates should preferably be interested in numerical analysis with particular reference to partial differential equations.

Starting salary £2,748 (subject to review) inclusive of London Allowance and threshold payments.

Enquiries should be made to Professor J. Crank, Head of the School of Mathematics, Brunel University, Uxbridge, Middlesex UB8 3PH, or telephone Uxbridge 37188, extension 377. Closing date: 31 July 1975.

CARDIFF
UNIVERSITY COLLEGE

Applications are invited for the following vacancy:

TUTORIAL FELLOW IN THE FACULTY OF ECONOMIC AND SOCIAL STUDIES

Salary range: £1,800 to £1,962 plus thresholds (under review). Duties to commence October 1, 1975. Closing date for applications July 18, 1975.

Applications, together with the names and addresses of two referees, should be forwarded to The Registrar, University College, P.O. Box 78, Cardiff CF1 1XL. Please quote

LOUGHBOROUGH UNIVERSITY OF TECHNOLOGY

CHAIR IN SOCIAL ADMINISTRATION

Applications are invited for the new Chair in Social Administration tenable in the Department of Social Sciences. It is hoped that the successful candidate will be able to take up the Chair during the academic year 1975-6.

Candidates, who should preferably have some experience concerned with the practice as well as the teaching of social administration, will be expected to develop a new honours degree course in social administration. This course is planned to begin in October, 1976, with an intake to Loughborough College of Education which is expected to amalgamate with the University at the beginning of the next quinquennium.

Salary within professorial range. Requests for application form and further details to Assistant Registrar (Establishment) Ref. 75/28SS.

Loughborough *Leicestershire*

AUSTRALIA (QUEENSLAND)
THE UNIVERSITY

LECTURER IN THEORY/PHILOSOPHY OF EDUCATION DEPARTMENT OF EXTERNAL STUDIES

Applicants should hold a higher degree, preferably a doctorate, with a special orientation towards the theory or philosophy of education. The successful applicant will be responsible for teaching external students at the second and third year level in the Bachelor of Education degree course. (Quote reference No. D34675) 1st August, 1975.

Salary: Within the range $A11,655 to $A15,648 per annum.

Other Benefits: Superannuation similar to F.S.S.U., housing assistance, study leave, travelling and removal expenses.

Additional information and application forms are obtainable from the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF.

AFRICA
UNIVERSITY OF BOTSWANA LESOTHO AND SWAZILAND

Applications are invited for a two-years' appointment as (a) LECTURER or (b) ASSISTANT LECTURER in STATISTICS on the Kwaluseni campus in Swaziland. Candidates must hold a Master's degree in Statistics or related subject, with Economics or Sociology with Statistics as a major subject. They are expected to have some research ability as well as some teaching experience and practical knowledge of the developing problems of developing countries. A special interest in Economic Demography and/or Economic Statistics or Survey Methods would be desirable.

Salary scales: (a) R3,924 to R5,376 per annum. (b) R2,748 to R3,348 per annum. (£1 sterling equals R1.53). The British Government may supplement salary of Lecturer in range £624 to £864 per annum (sterling) for married appointee or £84 to £180 per annum (sterling) for single appointee and provide children's holiday visit passages. This supplementation is unlikely to be applied to appointment at Assistant Lecturer level. These rates are under review; new rates will apply from 1 April 1975. Twenty five per cent gratuity in lieu of superannuation. Accommodation at reasonable rent; education allowance; family passages; vacation leave.

Detailed applications (two copies), including a curriculum vitae and naming three referees should be forwarded by airmail not later than [illegible] August 1975, to the Senior Assistant Registrar (Appointments), University of Botswana, Lesotho and Swaziland, Roma, Lesotho, Africa. Applicants resident in United Kingdom should also send one copy to Inter-University Council, 90/91 Tottenham Court Road, London W1P 0DT. Further particulars may be obtained

Universities continued

LOUGHBOROUGH UNIVERSITY OF TECHNOLOGY

Management Studies

Applications are invited for four posts in the expanding Department of Management Studies.

Lecturer in Accounting

specializing in financial accounting, auditing and accounting theory. (Ref. 75/17MS.)

Lecturer in Financial Management

specialising in business finance and financial institutions. (Ref. 75/18MS.)

Lecturer in International Business

specialising in international marketing. (Ref. 75/19MS.)

Lecturer in Quantitative Analysis

specialising in applied statistics, operational research and/or systems analysis. (Ref. 75/20MS.)

Salaries to commence at a point within the lecturer scale £2,118-£4,896 (under review), plus threshold payment £229.68. Postcard requests for application forms and further particulars to Assistant Registrar, quoting appropriate reference.

Loughborough Leicestershire

UWIST CARDIFF

University of Wales Institute of Science and Technology

LECTURER
Town Planning
(Planning Administration and Procedures).
Salary: £2,118-£4,896
(under review).

RADAR TRAINING AND RESEARCH OFFICER
(Maritime Studies)
Salary: £2,118-£3,990
(under review)

RESEARCH ASSOCIATES
(Architecture)
For multidisciplinary team (Mathematicians, Engineers, Psychologists, Sociologists, Architects).
Salary: £2,118-£3,108
(under review)

Closing date (all posts): Three weeks from date of advertisement. All salaries plus threshold £229 (under review).

Requests (quoting Ref. and Post) for details and application form to Personnel Section, UWIST, Cardiff CF1 3NU.

LOUGHBOROUGH UNIVERSITY OF TECHNOLOGY

ACCESS TO INFORMATION

Applications are invited for two posts of RESEARCH FELLOW in the Department of Library and Information Studies, to participate in a pilot study, funded by the British Library, establishing a methodology to assess information services. Candidates should preferably have suitable library experience and/or some experience of statistical and/or survey techniques.

Salaries on scale £2,118-£3,990 (under review, new scales partially agreed). Further particulars and application forms to be returned as soon as possible from Assistant Registrar (Establishment) ref. 75/26LS.

Loughborough *Leicestershire*

LOUGHBOROUGH UNIVERSITY OF TECHNOLOGY

Ph.D. TOTAL TECHNOLOGY

Applications are invited from graduates for places on the Total Technology Programme. This is a new approach to post-graduate training for people intending to make a career in industry. The programme is a three year course of study and research of a multi-disciplinary nature pursued in close collaboration with companies. Lectures deal with production engineering, finance and the managerial aspects of modern industry. S.R.C. studentships are available for the course and may be supplemented by the firms collaborating in research work.

Further details from Professor T. M. Husband, Department of Engineering Production (Ref: THES).

Loughborough *Leicestershire,*

AUSTRALIA
MONASH UNIVERSITY
Melbourne

CHAIRS IN THE FACULTY OF ECONOMICS AND POLITICS

Applications are invited for the undermentioned Chairs:

CHAIR OF ACCOUNTING AND FINANCE: This Chair is one of two in the Department of Accounting and Finance. Applicants should have research and teaching interests in one of the areas of business finance, management accounting or financial accounting. The appointee would be expected to take part in undergraduate teaching and graduate programmes leading to M.Admin., M.Econ., and Ph.D. degrees.

Enquiries of an academic nature should be addressed to the Chairman of the Department, Professor M. S. Henderson.

CHAIR OF ECONOMICS: The Chair will be held in the Department of Economics in which there are several Professors of Economics whose main interests are in industrial economics, international economics and the general microeconomic area. Applications are sought from those in any of economics, but especially from those whose interests do not overlap strongly with those specified above.

Enquiries about the Department may be addressed to Professor R. H. Snape, in the University.

CHAIR OF MARKETING: Department of Administrative Studies: The professor will be expected to take an active interest in the M.Admin. degree, which is part of a graduate programme of studies including doctoral studies available to students interested in administration, and to look after the teaching of an undergraduate marketing subject.

There are two Chairs in the Department of Administrative Studies: Administration and Marketing. In addition there are five other departments in the Faculty with Chairs of Accounting and Finance (2), Economics (5), Econometrics and Operations Research (2), Economic History (1) and Politics (3).

Enquiries about the department may be addressed to the Chairman, Professor A. K. Collins, in the University.

Salary: $A23,569 per annum. Superannuation is based on an endowment assurance scheme, the employee and employer contributing 5 per cent and 10 per cent respectively.

Information on application procedure and further particulars may be obtained from the Secretary-General, Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF.

Applications close on 31st August 1975.

The Council reserves the right to make no appointment or to appoint by invitation at any stage.

AUSTRALIA
AUSTRALIAN NATIONAL UNIVERSITY

Applications are invited for appointment to the following:

JOHN CURTIN SCHOOL OF MEDICAL RESEARCH

RESEARCH FELLOW DEPARTMENT OF PHYSICAL BIOCHEMISTRY. Applicants should be interested in studying enzymes involved in sulphate metabolism or in steroid reduction. The successful applicant will join a research group led by Dr. A. B. Roy. Research Fellows should have at least a Ph.D. degree or equivalent experience.

Information on facilities available may be obtained from the Department of Physical Biochemistry (Head: Professor L. W. Nichol).

Closing date: 22nd August, 1975.

Salaries: Salary on appointment to the post will be in accordance with qualifications and experience within the range: Research Fellow $A11,658-$15,640 per annum. Current exchange rates are $A1 equals 56p, $US1.34.

Other Conditions—Tenure: Research Fellow normally for three years in the first instance with possibility of extension to five years.

Reasonable travel expenses are paid and assistance with housing is given for an appointee from outside Canberra. Superannuation benefits are available.

Prospective applicants should write to the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF, for further particulars before applying.

The University reserves the right not to make an appointment or to make an appointment by invitation at any time.

AUSTRALIA
MONASH UNIVERSITY
Melbourne

DEPARTMENT OF JAPANESE

SENIOR LECTURER/LECTURER

Qualifications: Higher degree in Linguistics, Japanese Linguistics, or teaching of Japanese as a foreign language; fluency in Japanese and English; tertiary teaching and research experience. Candidates who possess comparable qualifications in the field of Japanese literature and have experience in the teaching of Japanese language may also be considered.

Salary scale: Senior Lecturer, $A15,954 to $A18,644 per annum; Lecturer, $A11,655 to $A15,644 per annum with superannuation based on an endowment assurance scheme, the employee and employer contributing 5 per cent and 10 per cent respectively.

Benefits: Travelling expenses for appointee and family; removal allowance; repatriation after three years' appointment if desired; temporary housing for an initial period. Study leave entitlement accumulates at the rate of one month's leave for each six months' service up to six years, with provision for financial assistance.

Further general information and details of application procedure are available from the Academic Registrar, Monash University, Wellington Road, Clayton, Victoria 3168, Australia, or the Secretary General, Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF. Enquiries about the department to Professor J. V. Neustupny, in the University.

Closing date: 30 September, 1975.

The University reserves the right to make no appointment or to appoint by invitation.

AUSTRALIA
THE UNIVERSITY
Queensland

READER IN ECONOMICS OR EDUCATION (one position only)

DEPARTMENT OF EXTERNAL STUDIES

ECONOMICS: Applicants should have appropriate qualifications and substantial research and postgraduate teaching experience in one of the major fields of Economics, Mathematical Economics or Economic Statistics. The successful applicant will be required to participate in the undergraduate teaching work of the Department and to assist in the development of a higher degree teaching programme for external students.

EDUCATION: Applicants should hold a higher degree preferably a doctorate, and have a distinguished background in either Cultural Foundations of Education or Psychology of Education. It is anticipated that the successful applicant will contribute substantially to research and external undergraduate and postgraduate teaching developments in the Department as well as provide leadership in the field of educational studies generally. 26 July, 1975.

Salary for a Reader is $A20,202 per annum.

Other Benefits: Superannuation similar to F.S.S.U., housing assistance, study leave, travelling and removal expenses.

Additional information and application forms are obtainable from the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF.

AUSTRALIA
MONASH UNIVERSITY
Melbourne

DEPARTMENT OF ECONOMIC HISTORY

TUTOR/SENIOR TUTOR IN ECONOMIC HISTORY

The successful applicant will be required to conduct tutorials in the first-year course, which surveys a long period of European and Chinese economic history (a prior knowledge of Chinese economic history is not necessary). The person appointed may be offered some teaching in other economic history of economics courses in which he has a special interest. Time is available for research and recent graduates will be encouraged to enrol for a higher degree.

Salary range: Senior Tutor, $A10,101 to $A11,665 per annum with superannuation based on an endowment assurance scheme, the employee and employer contributing 5 per cent and 10 per cent respectively. Tutor, $A8,288 to $A9,842 per annum.

Benefits: Travelling expenses for appointee and family; removal allowance; temporary housing for an initial period; repatriation after three years' service if desired.

Further general information and details of application procedure are available from the Academic Registrar, Monash University, Wellington Road, Clayton, Victoria 3168, Australia, or the Secretary General, Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF. Enquiries about the Department to the Chairman, Professor J. W. McCarty, in the University.

Closing date: 15 August, 1975.

The University reserves the right to make no appointment or to appoint by invitation.

AUSTRALIA
THE UNIVERSITY
Melbourne

LECTURESHIP IN THE DEPARTMENT OF MATHEMATICS

Applications are invited for this position from candidates with suitable teaching and research experience in some branch of modern applied mathematics. The starting date is January 1, 1976, or as soon as possible thereafter.

The university reserves the right to fill the position for a limited tenure period of three years.

Salary: $A11,655 to $A15,648 per annum.

Further information, including conditions of appointment, is available from the Association of Commonwealth Universities (Appointments), 36 Gordon Square, London WC1H 0PF.

Applications close on July 21, 1975.

AUSTRALIA
MONASH UNIVERSITY
Melbourne

DEPARTMENT OF LINGUISTICS

TUTOR/SENIOR TUTOR

Applicants should have an honours degree or an M.A. in LINGUISTICS. Duties will be to give tutorials, and possibly a limited number of lectures, in linguistics. Commencing date is January 1, 1976.

Salary range: Senior Tutor $A10,101 to $A11,665 per annum with superannuation based on an endowment assurance scheme, the employee and employer contributing 5 per cent and 10 per cent respectively. Tutor $A8,288 to $A9,842 per annum.

Benefits: Travelling expenses for appointee and family; removal allowance; temporary housing for an initial period; repatriation after three years' service if desired.

Further general information and details of application procedure are available from the Academic Registrar, Monash University, Wellington Road, Clayton, Victoria 3168, Australia, or the Secretary General, Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF. Enquiries about the department to the Chairman, Professor U. G. E. Hammarström, in the University.

Closing date 9 August 1975.

The University reserves the right to make no appointment or to appoint by invitation.

AUSTRALIA
MONASH UNIVERSITY
Melbourne

CHAIR OF POLITICS

Applications are invited for appointment to a THIRD CHAIR in the Department of Politics. The other two Chairs in the Department are held by Professor S. R. Davis and Professor H. Feith (the present Chairman). Their respective fields of interest are the theory and practice of political institutions and Southeast Asian politics. The Chairmanship of the Department, which has 27 full time academic staff members and over 50 postgraduate students, normally rotates among the Professors.

Enquiries about the Department may be addressed to Professor H. Feith, in the University.

Salary: $A23,569 per annum. Superannuation is based on an endowment assurance scheme, the employee and employer contributing 5 per cent and 10 per cent respectively.

Full information on application procedure, conditions of appointment, etc., is available from the Secretary-General, Association of Commonwealth Universities (Appts), 36 Gordon Square, London WC1H 0PF, or the Academic Registrar, Monash University, Clayton, Victoria 3168, Australia.

Applications close on 18 August 1975. The council reserves the right to make no appointment or to appoint by invitation at any stage.

BELFAST
THE QUEEN'S UNIVERSITY

ADMINISTRATOR OF HALLS OF RESIDENCE

Applications are invited for the post of ADMINISTRATOR, The Queen's Elms Halls of Residence from 1st September, 1975, or such other date as may be arranged. Queen's Elms Halls of Residence consists of a federal group of five halls on a 15-acre site about one mile from the main University Building, providing accommodation for over 800 students. Salary scale (under review), £3,813 to £4,896 plus threshold payments of £229 per annum with F.S.S.U./U.S.S. and free accommodation. Assistance with removal expenses is available.

Further particulars may be obtained from the Personnel Officer, The Queen's University of Belfast, Belfast BT7 1NN, Northern Ireland, who should receive completed applications not later than 18th July, 1975 (please quote reference 75/THES).

BELFAST
THE QUEEN'S UNIVERSITY

LECTURESHIP IN ECONOMICS

Applications are invited for the post of LECTURER in ECONOMICS, tenable from 1st October, 1975, or such other date as may be arranged.

Salary scale is £2,118 to £4,896 (under review) with contributory pension rights under F.S.S.U./U.S.S. Initial placing on the salary scale will depend on qualifications and experience. Assistance is available with removal expenses.

Further particulars may be obtained from the Personnel Officer, The Queen's University of Belfast, BT7 1NN, Northern Ireland, by whom completed applications should be received not later than 18th July, 1975. (Please quote reference 75/THES.)

CARDIFF
UNIVERSITY COLLEGE

DEPARTMENT OF CHEMISTRY

Applications are invited for the following vacancy: LECTURER in ORGANIC CHEMISTRY.

Salary range: £2,118-£3,108 plus thresholds (under review). Duties to commence 1 October, 1975, or as soon as possible thereafter.

Applications, together with the names and addresses of two referees, should be forwarded to the Registrar, University College, P.O. Box 78, Cardiff CF1 1XL, from whom further particulars may be obtained. Closing date for applications 31 July, 1975. Please quote ref. 0353.

CARDIFF
UNIVERSITY COLLEGE

Applications are invited for the following vacancy:

LECTURER in the DEPARTMENT of GEOLOGY

Salary range £2,118-£4,896. Duties to commence 1 October 1975.

Applications, together with the names and addresses of two referees, should be forwarded to The Registrar, University College, P.O. Box 78, Cardiff CF1 1XL, from whom further particulars may be obtained. Closing date for applications 11 July, 1975. Please quote ref. 0354.

BIRMINGHAM
THE UNIVERSITY

ADMINISTRATIVE ASSISTANT

Applications are invited to fill a forthcoming vacancy in the Secretary's Office. The work is primarily concerned with the servicing of Council and other Committees and would suit graduate applicants, between 25 and 35, with prior administrative experience in the educational sector, the public services or industry.

Salary according to age, qualifications and experience in the IB (maximum £3,285) or IA (maximum £3,990) scale plus threshold payments and superannuation benefits.

Application forms should be returned by 11th July to the Senior Assistant Secretary, University of Birmingham, P.O. Box 363, Birmingham B15 2TT from whom further particulars may be obtained.

CAMBRIDGE
THE UNIVERSITY

DEPARTMENT OF EDUCATION

Applications are invited for the following lectureships:

UNIVERSITY LECTURER with special qualifications in the teaching of CHEMISTRY. Duties include courses on Teaching of Chemistry and Combined Sciences and in another branch of educational studies in which the applicant has an interest and, preferably, a qualification. Applicants should have had experience of school science teaching. Pensionable stipend for a University Lecturer is at present on a scale of £3,108 to £5,256 a year, plus threshold, with initial placing above the minimum where appropriate. Initial appointment for three years in the first instance with possibility of reappointment to the retiring age. The post is vacant from 1 September 1975. It is hoped to fill the vacancy as soon as possible after that date as can be arranged.

DEPARTMENTAL LECTURESHIP with special qualifications in MATHEMATICS to take office on 1 October 1975 or as soon as possible thereafter. Duties include courses in the Teaching of Mathematics and in another branch of educational studies in which the applicant has an interest and, preferably, a qualification. The applicant should have had recent school experience. Pensionable stipend for a Departmental Lecturer is on a scale of £2,931 to £3,813 a year, plus threshold, with initial place above the minimum where appropriate. Initial appointment for three years with possible reappointment for two further years. Maximum tenure five years.

Further particulars of both lectureships may be obtained from the Secretary of the Appointments Committee, Department of Education, 17 Brookside, Cambridge CB2 1JG, to whom applications (two copies) together with the names of not more than three referees should be sent not later than 23rd July, 1975. A grant is made towards removal expenses.

CAMBRIDGE
THE UNIVERSITY

The Appointments Committee of the History Faculty intend to appoint from 1 October, 1975, or as soon as possible thereafter, a UNIVERSITY LECTURER or a UNIVERSITY ASSISTANT LECTURER in EARLY MODERN ENGLISH POLITICAL and CONSTITUTIONAL HISTORY.

Scale of Stipends: £3,108 rising by 12 annual increments to £5,256 for a University Lecturer; £2,247 rising by four annual increments to £2,931 for an Assistant Lecturer: subject certain deductions for college emoluments.

Applications (11 copies) with names of not more than three referees, to reach the Secretary, Appointments Committee, Faculty of History, West Road, Cambridge, by 23 July.

CAMBRIDGE
CAMBRIDGE INSTITUTE OF EDUCATION

Applications are invited for the post of TUTOR in CURRICULUM STUDIES at the Cambridge Institute of Education. The vacancy arises from the appointment of Dr. H. Sockett to a University Chair in Education.

Candidates should have experience both of teaching in school and in teacher education. Preference will be given to those with qualifications in the Philosophy of Education. The successful applicant will be engaged in teaching full-time and part-time Diploma courses and in other in-service activities of the Institute. Salary on Cambridge University Lecturers' scale; placing according to qualifications and experience.

Further particulars may be obtained from the Secretary (reference (B)), Shaftesbury Road, Cambridge CB2 2BX.

DUNDEE
THE UNIVERSITY

BURSAR OF RESIDENCES/CATERING OFFICER

APPLICATIONS are invited for this important new POST which it is hoped to fill by October 1, 1975.

The person appointed will be responsible for the overall management and direction of University Residences and Catering Units in accordance with policies determined by the University Court, to which he or she will act as Catering Adviser. Vacation letting is an important and still increasing element in the turnover of the Residences. Candidates should have had substantial experience in management, catering, control and direction of staff and coordinated purchasing. They should also be cost orientated.

Salary will be negotiable within the range £4,500 to £6,000 per annum with contributory superannuation rights and good annual leave entitlement.

Applications (six copies), which should contain full details of qualifications and previous experience and should include the names and addresses of three referees, should be submitted not later than July 18, 1975, to the Secretary, The University, Dundee DD1 4HN, from whom further particulars of the appointment may be obtained.

EDINBURGH
THE UNIVERSITY
DEPARTMENT OF HUMANITY (LATIN)

LECTURESHIP

Applications are invited for a Lectureship in the above Department. The person appointed should take up duties on 1st October 1975, or as soon as may be arranged.

Salary will be on the scale £2,118-£4,896 per annum (under review), with superannuation benefits.

Applications (6 copies) with curriculum vitae and the names of two referees, should be sent to the Secretary to the University, University of Edinburgh, Old College, South Bridge, Edinburgh EH8 9YL, from whom further particulars may be obtained. The closing date for applications is 31st July 1975. Please quote reference 1035.

HULL
THE UNIVERSITY

LECTURESHIP IN LINGUISTICS

The Department of Linguistics requires a Lecturer from 1st October, 1975, or as soon as possible thereafter, to participate in the teaching of the Department, and in particular to assist with the inauguration of the Joint Honours degree course in Linguistics in October, 1976. Special consideration will be given to candidates with particular research interests in the fields of Syntax or Historical Linguistics though candidates with other specializations should not be deterred from applying.

Salary Scale: £2,347-£5,196 per annum (including threshold) plus superannuation benefits.

Applications (6 copies) giving details of age, qualifications and experience together with the names of three referees should be sent by 7th July, 1975, to the Registrar, The University of Hull, Hull, HU6 7RX, from whom further particulars may be obtained.

KEELE
THE UNIVERSITY

DEPARTMENT OF ECONOMICS

Applications are invited for the post of LECTURER/TEMPORARY LECTURER in ECONOMICS. Knowledge of Labour Economics is desirable but not essential.

Salary in points one to three in the Lecturer's scale (£2,118 to £2,412) (under review) per annum.

Further particulars and application forms from the Registrar, The University, Keele, Staffs., ST5 5BG, to whom completed forms should be returned by 18th July, 1975.

JAMAICA
UNIVERSITY OF THE WEST INDIES

Applications are invited for the posts of (a) PROFESSOR and (b) SENIOR LECTURER or LECTURER in SPANISH. For post (a) a specialist in Latin American literature is required. For post (b) experience in modern techniques of foreign language instruction is essential. Applicants should have research interests in at least one of the following fields: applied linguistics, the linguistics of Spanish, development of the Spanish language and theory and practice of translation.

Salary scales: Professor J$12,912 to J$16,344 per annum; Senior Lecturer J$8,460 to J$12,492 per annum; Lecturer J$6,168 to J$9,768 per annum. (£1 sterling equals J$2.12.) Unfurnished accommodation (at by University at rental) of 10 per cent of salary. If, however, the staff member provides his own accommodation, he will be paid a housing allowance of 20 per cent of his pensionable salary. F.S.S.U. Study and travel grant. Family passages.

Detailed applications (six copies) including a curriculum vitae and naming three referees should be sent as soon as possible to the Registrar, University of the West Indies, Mona, Kingston 7, Jamaica. Further particulars are available from the same source and should be obtained before an application is made.

LANCASTER
THE UNIVERSITY

DEPARTMENT OF BEHAVIOUR IN ORGANIZATIONS

Applications are invited for a LECTURESHIP in the above department, tenable from 1st October, 1975. Candidates should have good qualifications in Sociology and a specialized interest in organizational behaviour. Employment or research experience in industry or public administration is desirable.

Salary, according to age and experience, on the scale £2,118 to £4,896 (at present under review), plus threshold and U.S.S.

Further particulars may be obtained (quoting reference L.805/C) from the Establishment Officer, University of Lancaster, University House, Lancaster LA1 4YW, to whom applications (five copies), naming three referees, should be sent not later than 11th July, 1975.

LEEDS
THE UNIVERSITY

INSTITUTE OF EDUCATION

OVERSEAS EDUCATION UNIT

Applications are invited for a temporary LECTURESHIP in EDUCATION for two years from 1st September, 1975 (or later by arrangement). Salary on the scale £2,118 to £4,896 (under review).

The duties of the post are in the field of Primary Education in developing countries. Applicants should offer relevant qualifications and third world experience. An interest in one or more of the following would be useful: Primary School Organisation and Development, Primary Teacher-Training, Rural and Community Education, Teaching of Mathematics.

Forms of application and further particulars from the Registrar, The University, Leeds LS2 9JT, quoting reference number 68/8/DO. Closing date for applications 21st July, 1975.

Universities continued

JAMAICA

UNIVERSITY OF THE WEST INDIES

Applications are invited for the post of (a) SENIOR LECTURER or (b) LECTURER in MASS COMMUNICATION. The appointee will be responsible, initially, for teaching Broadcast Writing and Production in the Diploma Course, but will be expected to handle other electronic media courses when the programme is expanded to include an option in the undergraduate degree. The appointee should have fairly wide practical experience in the broadcast media and should be competent to teach courses to University standard. Knowledge of West Indian media would be an advantage.

Salary scales (a) J$8,460 to J$12,492 per annum; (b) J$6,168 to J$9,768 per annum (£1 sterling equals J$2.07). Unfurnished accommodation let by the University at rental of 10 per cent of salary. Alternatively housing allowance of 20 per cent of salary may be paid. Study and travel grant. Family passages.

Detailed applications (six copies) including a curriculum vitae and naming three referees should be sent as soon as possible to the Registrar, University of the West Indies, Mona, Kingston 7, Jamaica. Further particulars are available from the same source and should be obtained before an application is made.

LANCASTER

THE UNIVERSITY

LECTURER

Applications are invited for a LECTURESHIP in ITALIAN STUDIES from 1 October, 1975. Candidates should have a strong research interest in Medieval Italian Literature. An ability to assist in the teaching of Modern Literature would be an advantage.

Salary will be at the lower end of the Lecturer Scale (at present under review) plus threshold and U.S.S.

Further particulars may be obtained (quoting reference L.088 L) from the Establishment Officer, the University of Lancaster, University House, Lancaster LA1 4YW, to whom applications (five copies), naming three referees, should be sent not later than 14th July, 1975.

LEEDS

THE UNIVERSITY

DEPARTMENT OF SOCIOLOGY

Applications are invited for the post of TEMPORARY LECTURER for the 1975/76 academic year.

Salary within the range of £2,118 to £2,412 (under review) plus threshold. Application forms and further particulars may be obtained from the Registrar, The University, Leeds LS2 9JT, quoting reference 34/2/DG.

Closing date for applications 12 July 1975.

LEEDS

THE UNIVERSITY

DEPARTMENT OF LINGUISTICS

Applications are invited from Jordanian, Lebanese, Palestinian or Syrian candidates for a post of RESEARCH FELLOW on a two-year programme (to start September/October, 1975) into the feasibility of investigating and describing in modern linguistic terms the educated spoken Arabic in use between Egypt, Jordan, Lebanon, Palestine and Syria.

An M.A. or similar qualification in Linguistics is desirable and a thoroughgoing command of English essential.

Salary in the region of £2,400 per annum. Membership of U.S.S.

Further particulars may be obtained from Professor T. F. Mitchell, Department of Linguistics, The University, Leeds LS2 9JT.

LONDON

THE CITY UNIVERSITY

DEPARTMENT OF SOCIAL SCIENCE AND HUMANITIES

TWO LECTURESHIPS IN SOCIOLOGY

Applications are invited for the above posts to commence on 1st September 1975. One post is permanent, the other is temporary. Candidates from a broad range of specialities will be considered.

Salary scale £2,118-£4,896 per annum (under review) plus £255 London Allowance and £229 Threshold Supplement.

Application forms and further particulars may be obtained from the Academic Registrar, The City University, St John Street, London EC1V 4PB (telephone 01-253 4399 Ext. [illegible]) (quote reference [illegible]). Closing date for applications 7 July 1975.

MIDDLESEX

BRUNEL UNIVERSITY

SCHOOL OF SOCIAL SCIENCES

DEPARTMENT OF LAW

Applications are invited for two temporary LECTURESHIPS in LAW beginning in September, 1975, or as soon as possible thereafter. One of the persons appointed will preferably have a major interest in Land Law and Equity and Trusts and the other in Criminal Law and Criminology, but candidates with other fields of interest will be fully considered.

The salary scales for lecturers will be the normal University scales which are currently under review, plus London Allowance of £255 per annum.

Further details and application form from the Assistant Secretary (Establishment), Brunel University, Uxbridge, Middlesex UB8 3PH, or telephone Uxbridge 37188, extension 4P. Closing date 18th July 1975.

LONDON

UNIVERSITY OF LONDON INSTITUTE OF EDUCATION

SOCIOLOGICAL RESEARCH UNIT

The S.R.U. has a vacancy for a RESEARCH ASSISTANT at a salary of not more than £1,947 per annum plus threshold £229 plus London Allowance £255 for an initial period of one year, commencing 1 September, 1975. The position would be appropriate to a new graduate in any field of the social sciences.

Applications, including curriculum vitae, should be sent to Professor Bernstein, 59 Gordon Square, London, WC1.

MANCHESTER

THE UNIVERSITY

LECTURER IN ECONOMETRICS

Applications are invited for this post from candidates with an interest in one or more of the following fields: mathematical economics, econometric theory, applied econometrics, multivariate analysis for social scientists.

Salary range per annum (under review) £2,118-£2,580 plus threshold payments. Superannuation.

Further particulars and application forms (returnable by July 22nd) from the Registrar, The University, Manchester M13 9PL. Quote ref. 137/75 THES.

MANCHESTER

THE UNIVERSITY

PART-TIME RESEARCH ASSISTANT IN THE DEPARTMENT OF GOVERNMENT

Applications are invited for this one year appointment to assist two investigators in studying the politics of the Church of England. This involves a survey of church activists. Applicants should preferably have some experience of surveys of data analysis. Hours of work (average two days per week) will be flexible. Salary proportionate to the range £1,800 to £2,757 p.a. for full time staff.

Further particulars and application forms (returnable by July 14th) from the Registrar, The University, Manchester M13 9PL. Quote ref.: 140/75 THES.

MIDDLESEX

BRUNEL UNIVERSITY

RESEARCH FELLOWSHIP

Applications are invited for a post-doctoral Research Fellowship provided by the S.R.C. in the Departments of Industrial Chemistry and Electrical Engineering and Electronics. The project, which is funded for three years, concerns the application of on-line control procedures to catalytic processes, and will involve the use of optimisation techniques.

Applicants should preferably have a background of chemical and/or control engineering, and have had programming experience.

Salary £3,041 to £3,566 (includes threshold and London weighting) (under review) plus U.S.S. benefits.

Form and further details from Assistant Secretary (Establishment), Brunel University, Uxbridge, Middlesex, UB8 3PH, or telephone Uxbridge 37188, extension 77. Closing date 25 July, 1975.

PAPUA NEW GUINEA

THE PAPUA NEW GUINEA UNIVERSITY OF TECHNOLOGY

SENIOR ASSISTANT REGISTRAR/ASSISTANT REGISTRAR

The post of Senior ASSISTANT REGISTRAR/ASSISTANT REGISTRAR is vacant within the Office of the Registrar. The post falls within the responsibilities of the Deputy Registrar, whose duties cover the following areas:

THE ACADEMIC ADMINISTRATION SECTION.

STUDENT ADMINISTRATION.

PERSONNEL ADMINISTRATION.

GENERAL ADMINISTRATION.

The successful applicant will be expected to assist in the execution of some or all of the areas listed above, dependent on qualifications and experience. Applicants should therefore have experience and knowledge of University administration, together with a high proficiency in written English. Preference will be given to applicants with an appropriate degree and previous experience in a University environment.

Tenure of office: The successful candidate will be offered an appointment for a period of two years in the first instance, subject to further extension by mutually agreed terms.

Salary: SA13,036 range $14,690, according to qualifications and previous experience together with appropriate allowances.

Allowances: Additional to salary are payable as follows: Married, $A2,400 per annum; Single $A1,300 per annum. A child allowance of $A160 per annum is also payable. Other benefits include furnished housing (hard goods only) supplied at nominal rental, leave fares to place of recruitment every second year and equivalent fares to Canberra each alternate year and six weeks' annual leave.

Applications in duplicate should include full particulars of age, nationality, marital status and family if any, qualifications, experience, present post, date of availability and the names and addresses of three referees from whom confidential inquiries may be made.

Applications close on 18 July, 1975, and should be forwarded to: The Registrar, The Papua New Guinea University of Technology, P.O. Box 793, Lae, Papua New Guinea.

An additional copy should be sent to the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF, from whom general information can be obtained.

NIGERIA

THE UNIVERSITY

CALABAR CAMPUS

Advert Ref.: UNP/SSA/CC/75/1

Applications are invited from suitably qualified candidates for posts of PROFESSORS and READERS in the following subjects.

FACULTY OF ARTS
ENGLISH, HISTORY, ARCHAEOLOGY, LANGUAGES (French, German, Nigerian Languages or Linguistics).

FACULTY OF SCIENCE
BOTANY, CHEMISTRY, GEOLOGY, MATHEMATICS, PHYSICS, STATISTICS, ZOOLOGY.

FACULTY OF SOCIAL SCIENCES
ECONOMICS, GEOGRAPHY, POLITICAL SCIENCE, SOCIOLOGY/ANTHROPOLOGY.

FACULTY OF EDUCATION
EDUCATION.

Candidates must be distinguished scholars who have made substantial contribution to knowledge through research and scholarly publications and have had adequate university administrative and teaching experience including the direction and supervision of graduate research. They will also be required to show evidence of continuing research. Appointees to the posts of professor will assume administrative responsibility of the respective departments.

Salary Scales: Professor Scale SA 3.0 N8,730-11,020 per annum or N8,810-12,311. Reader: Level 14: N7,760-9,100 (N1 equals £0.675 or $1.60 approx.)

Conditions of Service: Fare paid for appointee, wife and up to five children under eleven years of age on appointment, leave after 21 months' tour and on termination for expatriates. Eight weeks annual leave with local leave allowance for indigenous staff. Car allowance, superannuation scheme, free medical services, part-furnished accommodation at standard rates.

Method of application: Ten copies of typewritten application giving details of educational and professional qualifications, institutions attended with dates, experience showing institutions with dates, nationality, marital status, age and names and addresses of three referees competent to attest to candidate's professional ability, to The Personnel Officer, University of Nigeria, Nsukka, East Central State, Nigeria. Applicants resident in U.K. should also send one copy of their application to the London Representative of the University of Nigeria, 58/60 Hallam Street, London W1N 5LH.

Closing date: 28th July 1975.

NIGERIA

THE UNIVERSITY IBADAN

Applications are invited for the following posts in the DEPARTMENT OF EDUCATION:

SENIOR LECTURER in the PHILOSOPHY of EDUCATION.

SENIOR LECTURER in EDUCATIONAL PSYCHOLOGY.

SENIOR LECTURER in EDUCATIONAL PLANNING and ADMINISTRATION.

Applicants must hold research degrees and must have at least five years' experience as UNIVERSITY TEACHERS or in research positions in institutions of higher learning. They must have expertise in a specific aspect of their discipline in which they can supervise higher degree students and initiate programmes of research. They must have postgraduate professional qualifications in Education. Evidence of ability to contribute usefully to the work of an expanding department grappling with developmental problems in Education will be an advantage.

Salary scale: N6,895 to N8,730 per annum (£4,785 to £6,021 per annum sterling). £1 sterling equals N1.45. The British Expatriates Supplementation Scheme is unlikely to apply to these posts. Family passages; various allowances; superannuation scheme; biennial overseas leave.

Detailed applications (two copies), including a curriculum vitae and naming three referees, should be sent by airmail, not later than 20 July 1975, to the Registrar, University of Ibadan, Ibadan, Nigeria.

Applicants resident in U.K. should also send one copy to Inter-University Council, 90/91 Tottenham Court Road, London W1P 0DT. Further particulars may be obtained from either address.

READING

THE UNIVERSITY

LECTURESHIPS IN GERMAN

Applications are invited for two lectureships in German. A high degree of competence in the German language is expected together with the ability to help generally with the work of the Department. One post will be reserved for candidates with a specialist qualification in medieval literature, the other for candidates qualified in modern literature.

The persons appointed should take up duties on 1st October, 1975, or as soon as possible thereafter.

Further information may be obtained from the Registrar (Room 214, Whiteknights House), The University, Whiteknights, Reading RG6 2AH, by whom applications should be received not later than 12th July, 1975.

ST. ANDREWS

THE UNIVERSITY

DEPARTMENT OF ECONOMICS

Applications are invited for a LECTURESHIP in ECONOMICS and for a LECTURESHIP with special reference to POLITICS. Salary on scale £2,118 to £4,896, plus threshold payments. Initial appointment probably not higher than £3,383. F.S.S.U./U.S.S.

Applications (two copies) preferably in typescript, with the names of three referees should be sent by 21st July 1975, to the Establishments Officer of the University, College Gate, St. Andrews, Fife, from whom further particulars may be obtained.

SALFORD

THE UNIVERSITY

DEPARTMENT OF CIVIL ENGINEERING

LECTURESHIP/SENIOR LECTURESHIP

Applications are invited from good honours GRADUATES or POSTGRADUATES with professional experience in the main interests of FLUID MECHANICS: HYDRAULIC ENGINEERING HYDROLOGY. Duties will combine lecturing at undergraduate and postgraduate levels with research work in these fields. Research facilities available are excellent and a considerable programme of hydraulic engineering research work is in progress.

Salary scales: Lecturer £2,118 to £4,896 p.a. plus £230 p.a. threshold; Senior Lecturer £4,707 to £5,976 p.a. plus £230 threshold. These scales are at present under review and are expected to attract an increase analogous to the Houghton award and also a *cost-of-living rise from October, 1975.* FSSU/USS.

Further particulars and application forms may be obtained from the Registrar, University of Salford, Salford M5 4WT, to whom completed applications should be returned not later than 11 July, 1975, quoting reference C/170.

SHEFFIELD

THE UNIVERSITY

POSTGRADUATE SCHOOL OF LIBRARIANSHIP AND INFORMATION SCIENCE

Information needs and information services in local authority social services departments

Applications are invited for FOUR POSTS in connexion with the above project financed by British Library. Initial salaries on appropriate Research and Analogous Staff ranges as follows:

Principal Investigator, up to £4,456: tenure two years.

Senior Research Worker, up to £3,280: tenure two years.

Two Research Assistants, one up to £2,580: tenure one year eight months: one up to £2,347: tenure one year eight months.

Any salary award to university academic staff will apply to these posts. Suitable applicants may have backgrounds in social welfare or sociology as well as in librarianship information work. Project head: Mr. T. D. Wilson.

Further particulars from the Registrar and Secretary, The University, Sheffield S10 2TN, to whom applications (three copies) should be sent by July 14, 1975. Quote reference R.249/DI.

SHEFFIELD

THE UNIVERSITY

CHAIR OF FRENCH

Applications are invited for the CHAIR of FRENCH which will become vacant on the retirement of Professor W. H. Lyons in September, 1976. The field of candidates is not restricted to any particular area of French studies. Salary in the range approved for professorial appointments with superannuation provision.

Further particulars from the Registrar and Secretary, The University, Sheffield S10 2TN, to whom applications (one copy only) should be sent by September 30, 1975. Quote reference R.248/DI.

SUDAN

(Khartoum)

THE UNIVERSITY

Applications are invited for the following post in the DEPARTMENT of PHILOSOPHY. SENIOR LECTURER/LECTURER in PHILOSOPHY. Appointee is particularly required to teach Fifth Year Honours course in Modern Philosophy, and perhaps also to help with the Theory of Knowledge course for Preliminary Year, besides taking one or two other courses according to his special interests. In the case of a Senior Lectureship, candidates should have some years relevant teaching experience and will be expected to contribute on that basis to the administration and development of the Department.

Salary scales: Senior Lecturer £S2,400-£S2,800 per annum. Lecturer £S1,500-£S2,300 per annum (£1 sterling equals £S0.76). BESS is unlikely to apply to this appointment. Family passages; various allowances; superannuation scheme; annual overseas leave.

Detailed applications (two copies), including a curriculum vitae and naming three referees, should be sent by airmail, not later than 28 July, 1975, to the Personnel Secretary, University of Khartoum, P.O. Box 321, Khartoum, Sudan. Applicants resident in U.K. should also send one copy to Inter-University Council, 90/91 Tottenham Court Road, London W1P 0DT. Further particulars may be obtained from either address.

SUSSEX

THE UNIVERSITY

SCHOOL OF APPLIED SCIENCES

RESEARCH FELLOW

Applications are invited for a post as a post-doctoral RESEARCH FELLOW to study the effect of mechanical shock on the performance of shipborne equipment. Experience in the application of random vibration theory would be an advantage. The post is initially for a two year period. Salary in the range £2,787 to £3,108 plus £230 threshold payment and U.S.S. benefits.

Further information can be obtained from Dr. C. R. Burrows, School of Applied Sciences, University of Sussex, Falmer, Brighton BN1 9QT.

SUSSEX

THE UNIVERSITY

VICE-CHANCELLORSHIP

The Vice-Chancellor, Professor Asa Briggs, is taking up the post of Provost of Worcester College, Oxford, in September, 1976, and the University has established a Committee to find a successor. Persons interested in the vacancy, or who wish to submit names for consideration, are invited to write to the Chairman of the Committee, Sir Sydney Caffyn, care of Registrar and Secretary, The University of Sussex, Sussex House, Falmer, Brighton BN1 9RH.

TANZANIA

THE UNIVERSITY
Dar Es Salaam

Applications are invited for the post of (a) SENIOR LECTURER or (b) LECTURER in GEOGRAPHY. Applicants should have a further degree in Geography and some experience of university teaching. The vacancy is in the field of climatology or hydrometeorology. Salary scales: Senior Lecturer T£2,632 to T£3,052 per annum. Lecturer T£2,150 to T£2,570 per annum. (T£1 equals £1.18 sterling.) The British Government may supplement salaries in range £2,130 to £2,442 per annum (sterling) for married appointees or £1,266 to £1,494 per annum (sterling) for single appointees (normally free of all tax) and provide children's education allowances and holiday visit passages. F.S.S.U. Family passages; biennial overseas leave.

Detailed applications (two copies), including a curriculum vitae and naming three referees, should be sent by airmail, not later than 23 July, 1975, to the Chief Academic Officer, University of Dar es Salaam, P.O. Box 35091, Dar es Salaam, Tanzania. Applicants resident in U.K. should also send one copy to Inter-University Council, 90/91 Tottenham Court Road, London W1P 0DT. Further particulars may be obtained from either address.

TANZANIA

THE UNIVERSITY
Dar es Salaam

Applications are invited for the post of (a) SENIOR LECTURER or (b) LECTURER in FUEL CHEMISTRY. Applicants should have experience in teaching and research in Fuels and Fuel Technology including Coal utilization. The appointee will be responsible for the teaching and supervision of practical laboratory work in the field of chemical composition and physical properties of the main types of fuels to undergraduate and postgraduate students in the Department of Chemistry. The course also includes treatment and storage of fuels, energy conversion by combustion processes and atmospheric pollution by combustion production.

Salary scales: Senior Lecturer T£2,632 to T£3,052 per annum. Lecturer T£2,150 to T£2,570 per annum (T£1 equals £1.18 sterling). The British Government may supplement salaries in range of £2,130 to £2,442 per annum (sterling) for married appointees or £1,266 to £1,494 per annum (sterling) for single appointees (normally free of all tax) and provide children's education allowances and holiday visit passages. F.S.S.U. Family passages; biennial overseas leave.

Detailed applications (two copies), including a curriculum vitae and naming three referees, should be sent by airmail, not later than 23 July, 1975, to the Chief Academic Officer, University of Dar es Salaam, P.O. Box 35091, Dar es Salaam, Tanzania. Applicants resident in U.K. should also send one copy to Inter-University Council, 90/91 Tottenham Court Road, London W1P 0DT. Further particulars may be obtained from either address.

TANZANIA

THE UNIVERSITY
Dar es Salaam

Applications are invited for the post of SENIOR LECTURER or LECTURER in MATHEMATICS. Applicants should have a doctorate and/or considerable teaching experience in Operational Research. They should also have experience of the practical application of this subject and interest in its development in Tanzania.

Salary Scales: Senior Lecturer T£2,632-T£3,052 per annum. Lecturer T£2,150-T£2,570 per annum. (T£1 equals £1.18 sterling.) The British Government may supplement salaries in range £2,130-£2,442 per annum (sterling) for married appointees or £1,266-£1,494 per annum (sterling) for single appointees (normally free of all tax) and provide children's education allowances and holiday visit passages. F.S.S.U. Family passages; biennial overseas leave.

Detailed applications (two copies), including a curriculum vitae and naming three referees, should be sent by airmail, not later than 23 July, 1975, to the Chief Academic Officer, University of Dar es Salaam, P.O. Box 35091, Dar es Salaam, Tanzania. Applicants resident in United Kingdom should also send one copy to Inter-University Council, 90/91 Tottenham Court Road, London W1P 0DT. Further particulars may be obtained from either address.

OXFORD

ST. HILDA'S COLLEGE

TUTORIAL FELLOWSHIP IN MODERN HISTORY

The College proposes, if a suitable candidate presents herself, to elect a Tutorial Fellow in Modern History in either the medieval or the nineteenth and twentieth century fields, with a preference for the former. The Fellowship, for which women only are eligible, may be associated with a University (C.U.F.) Lectureship, for which no separate application is required.

Further particulars of the appointment may be obtained from the College Secretary, to whom applications (three copies) accompanied by a statement of the candidate's academic record and the names of three referees, should be sent by 15 September 1975. Shortlisted candidates will be interviewed in the later part of October and the appointment may be taken up at a date to be determined between January 1 and October 1, 1976.

CARDIFF

UNIVERSITY COLLEGE

Applications are invited for the following vacancy:

STAFF TUTOR IN PSYCHOLOGY
in the Department of Extra Mural Studies

Salary range: £2,118 to £4,896. Duties to commence as soon as possible.

Applications, together with the names and addresses of two referees, should be forwarded to The Registrar, University College, P.O. Box 78, Cardiff CF1 1XL, from whom further particulars may be obtained. Closing date for applications, July 26, 1975. Please quote reference 0338.

AUSTRALIA

MURDOCH UNIVERSITY
Perth, Western Australia

CHAIR IN VETERINARY CLINICAL STUDIES
(Ref. E.N. 0313)

Murdoch University, Western Australia's second university, admitted its first students in February, 1975. The University is committed to taking a fresh approach to higher education, with the goal of responding directly to the conditions and needs of the late twentieth century. This is reflected in admission policies, organisational structures, programmes of study, philosophies of teaching and recruitment of staff.

Applications are invited for appointment to the above-mentioned chair and it is anticipated that it will be taken up in early 1976. The appointee will be expected to play a major role in developing undergraduate teaching in his or her field, to encourage *interdisciplinary studies, and to implement* programmes of research and research training at the highest levels.

The fourth Australian Veterinary School, recently established at Murdoch University, will have a class size of 48. It is headed by Professor Robert H. Dunlop and is comprised of two interlocking divisions, Veterinary Biology led by Professor J. McC. Howell and Applied Veterinary Medicine led by Professor M. E. Nairn. The advertised position is in the latter division. The appointee will be involved in all aspects of planning the curriculum, staffing, research and service aspects in applied veterinary medicine and surgery. A registrable veterinary qualification combined with clinical, academic and postgraduate experience is required. A knowledge of Australian conditions is highly desirable. The duties will include the establishment of a veterinary practice and liaison with professional colleagues to ensure adequate exposure of students to field problems and clinical cases. A clinical teaching and research facility designed by outstanding international consultants is in an advanced design stage and should be ready for occupation by late 1977.

General: Murdoch University, the second to be established in Western Australia, was constituted in July, 1973, and enrolled its first 500 undergraduate and 60 postgraduate students in February of this year. It is expected that its enrolment will increase steadily to reach approximately 1,900 undergraduates and 300 postgraduates in 1978.

The University's educational plans and policies include commitments to a broadly based first year of undergraduate study, to the development of interdisciplinary programmes of study, to the provision of external studies, to a more than usually flexible admissions policy, and to professional programmes in teacher education and veterinary science. It is organized around six schools of study (Education, Environmental and Life Sciences, Human Communication, Mathematical and Physical Sciences, Social Inquiry, and Veterinary Studies), rather than the more traditional faculties and departments.

Murdoch University is located south of the Swan River, 13 kilometres from the centre of Perth, on a 174-hectare campus that is mainly under native bush. It is currently housed in five new major buildings, and it is expected that four further major buildings will be added during the triennium 1976-1978.

Salary: $A23,869 per annum.

Further information about this appointment, the University, and the conditions of appointment, including provision for superannuation, study leave, travelling and removal expenses, may be obtained from: The Secretary General, Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF, or from the Personnel Officer, Murdoch University, Murdoch, Western Australia 6153.

Applications, in duplicate, including all relevant information and the names and addresses of up to three referees, should be submitted as soon as possible to the Personnel Officer. Where applicants are resident in the United Kingdom, Europe or Africa, one further reference copy should be sent to the Association of Commonwealth Universities, London Office.

The closing date for applications is 15th August, 1975.

BATH

THE UNIVERSITY

SCHOOL OF HUMANITIES AND SOCIAL SCIENCES

LECTURER IN MATHEMATICAL ECONOMICS

Applications are invited for a LECTURESHIP in MATHEMATICAL ECONOMICS. Candidates should have an Honours Degree and preferably post-graduate qualifications and experience.

Salary in the range £2,118-£4,896 plus threshold payment of £229 per annum, according to qualifications and experience, but it is hoped to make an appointment in the lower part of the scale.

Further particulars and application forms from The Personnel Officer, University of Bath, Bath BA2 7AY, quoting reference number 75/105. Closing date for applications: 26th July, 1975. T.H.E.S.

BATH

THE UNIVERSITY

SCHOOL OF PHARMACY AND PHARMACOLOGY

LECTURER IN PHARMACY

Applications are invited for this appointment which offers an opportunity for a suitable qualified PHARMACIST to participate in the teaching and established research programmes in the field of Pharmaceutics/Pharmaceutical Micro-Biology.

Every encouragement will be given for the appointee to consolidate and develop his own specialized interests. It is hoped that the successful candidate would be able to start as soon as possible and certainly not later than January 1976.

Salary in the lower part of the range £2,118-£4,896 plus £229 threshold payment according to qualifications and experience.

Further particulars and application forms may be obtained from the Personnel Officer, University of Bath, Bath BA2 7AY. Quoting ref. no. 75/104. T.H.E.S. Closing date 19th July 1975.

Universities continued

The British Council

Invites applications for the following posts:

Lecturer in English Language (Mongolia)

University of Ulan Bator

Graduates with TEFL qualification and relevant teaching experience. Ability to use language laboratory and knowledge of audio-visual techniques and methodology essential. Single male candidates preferred. A knowledge of Russian or Mongolian an advantage.

Salary: 850-950 tugriks per month tax free (no exchange rate available) understood to be excellent salary, plus sterling subsidy of £1,374 p.a. paid in Britain.

Benefits: free accommodation; employers portion of superannuation. Contract one academic year. 75 SU 88

Lector in English (Hungary)

Eotvos Lorand University, Budapest
For September 1975

Arts graduate from a university in Britain with relevant EFL experience. Single candidates only, preferably aged 30-36.

Salary: 3800 forints per month minimum, tax free, sufficient for living expenses, plus sterling subsidy of £1,374 p.a. paid in Britain.

Benefits: free accommodation; medical scheme; employers portion superannuation. Ten month contract, renewable. 75 SU 87

Return fares are paid. Local contracts are guaranteed by the British Council.
Please write, briefly stating qualification and length of appropriate experience: quote relevant reference number for further details and an application form to The British Council (Appointments), 65 Davies Street, London W1Y 2AA.

AUSTRALIA

THE AUSTRALIAN NATIONAL UNIVERSITY

THE LIBRARY

SENIOR LIBRARY SYSTEMS ANALYST/PROGRAMMER

The University Library is seeking a senior SYSTEMS ANALYST/PROGRAMMER of proven ability in long-term systems analysis and planning and in the development and implementation of individual systems.

The position offered will carry central responsibility in the development of a fully integrated computer-based library network, covering, initially, acquisitions, cataloguing and circulation systems but extending eventually to include all major library operations. Linking with other internal and external systems is anticipated. Development is planned around a central machine-readable bibliographic file, utilizing the MARC formats, which may contain up to 1,000 million characters by 1980. Some maintenance and development of existing systems will also be required.

At present the university operates two central machines, a UNIVAC 1108 and an IBM 360/50 (on which the library's three off-line listing systems are run). Several smaller machines are currently being incorporated into a campus-wide computer network, to enable generalized remote access to the UNIVAC system and local processing in certain specialist areas.

Formal qualifications in librarianship and computing plus relevant experience in on-line real-time library applications and in handling MARC and other variable field formats would be extremely advantageous, although applicants of high general ability lacking some of these qualifications may also be considered.

The appointment will be according to qualifications and experience and salary will be within the limits $A10,311 to $A15,420 per annum (these rates are currently under review). In exceptional circumstances, appointment at a higher level might be possible.

Assistance with passages and accommodation will be provided. The successful applicant will be required to undergo a medical examination.

Written application, quoting reference number 75304, should be forwarded to the Registrar, The Australian National University, P.O. Box 4, Canberra, A.C.T. 2600, with whom applications close on July 24, 1975. W. S. Hamilton, Registrar.

ADELAIDE

THE UNIVERSITY
CLIVE E. BOYCE FELLOWSHIP

Applications are invited from suitably qualified university graduates for the Clive E. Boyce Fellowship valued at $A2,000. Enquiries of a professional nature should be directed to Professor R. A. Jensen, Dean of the Faculty of Architecture and Town Planning.

Full particulars of the Fellowship may be obtained from the undersigned, with whom applications close on 16 August 1975. H. B. Wesley Smith, Academic Registrar, Adelaide, S.A. 5001, Australia.

AFRICA

UNIVERSITY OF BOTSWANA, LESOTHO AND SWAZILAND

Applications are invited for the posts of: (a) SENIOR LECTURER/LECTURER in SCIENCE EDUCATION and (b) SENIOR LECTURER/LECTURER in AFRICAN LANGUAGES EDUCATION on the Botswana Campus. For post (a) applicants should have a degree and experience of teaching science in a secondary school or teacher training college. The appointee will be involved in preservice and in in-service courses, both part-time and full-time for the training of science teachers. For post (b) applicants should have a degree in African Languages and some experience of teaching. A specialisation in Setswana is essential and subsidiary qualifications in one of the Nguni Languages would be an advantage.

Salary scales: Senior Lecturers, R5,064 to R6,324 per annum; Lecturers, R3,924 to R5,376 per annum (£1 sterling equals R1.58). The British Government may supplement salaries in range £624 to £1,122 per annum (sterling) for married appointees or £84 to £318 per annum (sterling) for single appointees (normally free of all tax) and provide children's holiday visit passages. The supplementation rates are currently under review and revised rates will be effective from 1 April, 1975. Education allowance; 25 per cent gratuity for short term appointments; medical scheme; accommodation at reasonable rents; family passages; biennial overseas leave.

Detailed applications (three copies) including a curriculum vitae and naming three referees should be forwarded by air mail not later than 4 August, 1975, to the Registrar, University of Botswana, Lesotho and Swaziland, Roma, Lesotho, Africa. Applicants resident in U.K. should also send one copy to Inter-University Council, 90/91 Tottenham Court Road, London W1P 0DT. Further particulars are obtainable from either address.

AUSTRALIA

LA TROBE UNIVERSITY
Melbourne

LECTURER/SENIOR LECTURER IN SOCIOLOGY

Applications are invited from people interested in teaching sociology at both introductory and advanced levels. The department, with a staff numbering more than thirty members offers a wide variety of core and specialist courses. It also provides excellent opportunities for research, as members of staff and a large body of graduate students are involved in diverse research programmes.

Salary: Lecturer $A11,656—7 x $570—$15,646; Senior Lecturer $A15,984—5 x $518—$18,544.

Further information and application forms are available from the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF, or from the Registrar, La Trobe University, Bundoora, Victoria, Australia, 3083.

BRADFORD

THE UNIVERSITY

LECTURER IN HISTORY

SCHOOL OF PEACE STUDIES AND SCHOOL OF STUDIES IN SCIENCE AND SOCIETY

Applications are invited from persons suitably qualified to teach at undergraduate and postgraduate levels. They should have specialised in the study of industrialisation and the labour movement in the nineteenth and twentieth centuries with particular reference to West Yorkshire.

Salary within scale £2,778 to £6,050 (under review). Superannuable.

Further particulars and application forms (to be returned as soon as possible) obtainable from the Registrar, Post Ref. PS/L/4/TH, University [illegible]

BRADFORD

THE UNIVERSITY

SCHOOL OF STUDIES IN HUMAN PURPOSES AND COMMUNICATION

LECTURER IN PHILOSOPHY

Applications are invited for the above post, the first responsibility of which is for teaching social philosophy in several interdisciplinary Schools of Studies, but there will be growing opportunities for teaching in other fields.

Salary within scale £2,778 to £6,050 (under review). Superannuable.

Further particulars and application forms (to be returned as soon as possible) obtainable from the Registrar, Post Ref. *HU/L/6/TH, University of* Bradford, West Yorkshire BD7 1DP.

THE CITY UNIVERSITY

DEPARTMENT OF CHEMISTRY

RESEARCH ASSISTANTSHIP

Applications are invited for a Research Assistantship, tenable for up to three years from 1st October, 1975, to work on the development of new chemically-bonded stationary phases for high-pressure liquid chromatography.

Salary in scale £1,809 to £2,787 (under review) plus £399 London Allowance and £229 Threshold Supplement.

Applicants, who should have a degree in Chemistry and an aptitude for synthesis, should write to Dr. S. A. Matlin, Department of Chemistry, The City University, St. John Street, London EC1V 4PB, giving details of background and the names of two referees.

DURHAM

THE UNIVERSITY

DEPARTMENT OF CHEMISTRY

Applications are invited for an S.R.C. (Case) STUDENTSHIP in collaboration with I.C.I. Ltd., Pharmaceuticals Division, to investigate free-radical reactions for the synthesis of compounds which are potentially useful as anaesthetics. The research supervisors are Dr. R. D. Chambers (Durham) and Dr. W. U. M. Jones (I.C.I.).

Applicants should have (or expect to gain this summer) a good Honours Degree or Grad. R.I.C. in Chemistry. Applications should be made to Dr. R. D. Chambers, Department of Chemistry, University Science Laboratories, South Road, Durham DH1 3LE, from whom further particulars may be obtained.

KEELE

THE UNIVERSITY

DEPARTMENT OF FRENCH

Applications invited for post of LECTURER in FRENCH, commencing 1st October, 1975, or as soon as possible thereafter. Salary on first three points of Lecturers' scale (at present under review). Interest in practical teaching of the language would be an advantage; but consideration will be given to applicants working in any recognized field of French studies.

Application forms and further particulars from the Registrar, The University, Keele, Staffs., ST5 5BG, to whom completed forms should be returned by 18th July, 1975.

KEELE

THE UNIVERSITY

DEPARTMENT OF PHYSICS

Applications invited for post of DEMONSTRATOR to assist with laboratory and tutorial work in either Physics or Electronics. Post renewable up to total of three years. Salary £1,815 per annum (under review). Average 12 hours formal teaching per week. Rest of time available for research. Candidates should have good honours degrees.

Application forms and further particulars from the Registrar, The University, Keele, Staffs., ST5 5BG, to whom completed forms should be returned by 16th July, 1975.

KEELE

THE UNIVERSITY

DEPARTMENT OF CHEMISTRY

Applications invited for TWO DEMONSTRATORSHIPS in CHEMISTRY from 1st October, 1975, for one year in first instance, renewable up to total of three years, at a salary of £1,818 per annum (under review). Applicants should hold a good first degree or equivalent qualification in Chemistry; they will be expected to undertake research work in the Department for a higher *degree.*

Application forms and further particulars from the Registrar, The University, Keele, Staffs., ST5 5BG, to whom completed forms should be returned by 19th July, 1975.

KENT

THE UNIVERSITY
Canterbury

FACULTY OF HUMANITIES

TEMPORARY LECTURER IN HISTORY

Applications are invited for a temporary appointment as LECTURER in HISTORY from 1 October 1975 to 30 June 1976. Applicants should be prepared to teach Twentieth Century European and British History.

Salary will be on the lower part of the Lecturers scale £2,118 to £4,896 per annum (under review) plus threshold supplement of £229.68 per annum.

Further particulars and application forms may be obtained from the Assistant Registrar, Faculty of Humanities, the Registry, the University, Canterbury, Kent, quoting reference A.24/75 by whom completed applications should be [illegible]

KENYA

THE UNIVERSITY
Nairobi

Applications are invited for two LECTURESHIPS in ZOOLOGY. Applicants should be qualified in one of the following fields: terrestrial invertebrate ecology, resource ecology, invertebrate endocrinology, neurophysiology and cell biology. Applicants must have a PhD in an appropriate field and teaching experience is preferred. With the ecological posts tropical experience would be an advantage.

Salary scale: K£1,500 to K£2,880 p.a. (K£1 equals £1.11 sterling). The British Government may supplement salary in range £2,124 to £2,820 p.a. (sterling) for a married appointee or £1,038 to £1,374 p.a. (sterling) for a *single appointee (normally free* of all tax) and provide children's education allowances and holiday visit passages, F.S.S.U.; family passages; various allowances.

Detailed applications (2 copies) including a curriculum vitae and naming three referees should be sent by airmail not later than 31 July, 1975, to Registrar, University of Nairobi, P.O. Box 30197, Nairobi, Kenya. Applicants resident in U.K. should also send 1 copy to Inter-University Council, 90/91 Tottenham Court Road, London W1P 0DT. Further particulars may be obtained from either address.

KEELE

THE UNIVERSITY

APPOINTMENTS AND COUNSELLING SERVICE

Applications invited for the post of COUNSELLOR. The Service is concerned with educational, vocational and personal counselling of undergraduate and postgraduate students. Person appointed must be professionally equipped to deal with all aspects of the work and preferably under the age of 35.

Salary in scale £1,809 to £3,990/£3,815 to £4,896 per annum, plus threshold payments (under review).

Application forms and further particulars from the Registrar, The University, Keele, Staffs, ST5 5BG, to whom completed forms should be returned by 31st July 1975.

ADELAIDE

THE UNIVERSITY

Applications are invited for the following appointment:

(20907) (1) SENIOR LECTURER (EPIDEMIOLOGY) in the Department of Community Medicine. An applicant should have a higher qualification in Epidemiology or Population Statistics and have teaching and research experience in fields relative to community medicine. The department is a new department based at the Royal Adelaide Hospital with access to three teaching health centres. A particular interest of the department is primary health care evaluation and teaching responsibilities will include the development of record systems and learning programmes in medical statistics and epidemiology in relation to primary health care (15.8.75).

Salary scale. Senior Lecturer, $A15,400 by $A500 (5) to $A17,900 (plus a medical loading at the rate of $A3,333 a year).

Applications, in duplicate, giving particulars of age and marital status, details of academic record and experience and the names and addresses of two referees, should be sent to the Registrar of the University at G.P.O. Box 498, Adelaide, South Australia 5001. Further information available from the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF.

KENYA

UNIVERSITY OF NAIROBI

Applications are invited for the following posts in the HOUSING RESEARCH UNIT: RESEARCH FELLOW IN ECONOMICS. Applicants must possess a master's degree in economics or the equivalent and have at least two years' relevant postgraduate experience in the field of housing economics and/or housing finance. Teaching experience is desirable but not essential.

ENGINEER (SERVICES)
Applicants should have a master's degree in civil engineering (service) and should have a minimum of two years' relevant postgraduate experience. The appointee will join a multidisciplinary research team and will be required to advise on the most economic methods of installing services to housing estates and the most suitable means of sewage disposal to use in particular circumstances.

Salary scale: K£1,500 to K£2,880 per annum. (K£1 = £1.11 sterling.) The British Government may supplement salary in range £2,124 to £2,820 per annum (sterling) for married appointees or £1,038 to £1,374 per annum (sterling) for single appointees (normally free of all tax) and provide children's education allowances and holiday visit passages, F.S.S.U.; family passages; various allowances.

Detailed applications (two copies), including a curriculum vitae and naming three referees, should be sent by airmail not later than July 31, 1975, to Registrar, University of Nairobi, P.O. Box 30197, Nairobi, Kenya. Applicants resident in United Kingdom should also send one copy to Inter-University Council, 90-91 Tottenham Court Road, London W1P 0DT. Further particulars may be obtained from either address.

LEICESTER

THE UNIVERSITY

TUTORIAL ASSISTANTSHIP DEPARTMENT OF GEOGRAPHY

Applications are invited from men and women graduates for a Tutorial Assistantship in the Department of Geography.

Salary on scale £1,548-£1,635-£1,728-£1,821 plus threshold supplements. (Scale under review with effect from 1st October 1975.)

Further particulars from the Registrar [illegible]

LONDON

THE UNIVERSITY COLLEGE

DEPARTMENT OF CIVIL AND MUNICIPAL ENGINEERING

RESEARCH IN THIN CONCRETE SHELLS

RESEARCH ASSISTANT required, preferably post-doctoral or equivalent experience, to undertake an investigation into the effects of constructional imperfections on the behaviour of thin concrete shell structures: particularly cooling towers. The work would cover both theoretical and experimental studies and should lead to the formulation of design rules.

Salary according to qualifications and experience, within range £3,041 to £3,560 per annum inclusive (under review).

Applications to be sent to Dr. J. G. A. Croll, Department of Civil and Municipal Engineering, University College London, Gower Street, London WC1E 6BT, from whom further particulars can be obtained.

LONDON

THE UNIVERSITY
GOLDSMITHS' COLLEGE

DEPARTMENT OF ARTS, SCIENCE AND EDUCATION
New Cross, London SE14 6NW

Applications are invited for the post of LECTURER in PSYCHOLOGY (temporary in the first instance). Applicants should hold a good First or Higher Degree in Psychology, and be willing to teach in either (1) experimental design and statistics, (2) introductory psychology, particularly cognition; or (1) developmental and social psychology, (2) general introductory psychology.

The appointment will commence on September 1, 1975.

Write for further details, enclosing a stamped addressed A4 envelope, to the Personnel Officer, to whom applications should be sent by July 19, 1975.

MALAYA

THE UNIVERSITY

Applications are invited for the posts of LECTURER in the Faculty and Departments listed below. Qualifications and Experience: Candidates for the appointments should possess at least a Master's degree in the required field. Preference will be given to candidates who have teaching experience.

FACULTY OF EDUCATION
In the field of comparative teaching in Education. Candidates should be able to teach in the following fields:—(a) PHYSICS METHOD; (b) CHEMISTRY METHOD; (c) MATHEMATICS METHOD. Preference will be given to Physics Method.

DEPARTMENT OF BOTANY
In one of the following fields:—(a) BIOLOGY of rain-forest higher plants; (b) PLANT ANATOMY and EMBRYOLOGY; (c) PHOTOBIOLOGY; (d) QUANTITATIVE PLANT ECOLOGY; (e) BACTERIOLOGY or PLANT VIROLOGY; (f) CYTOTAXONOMY.

DEPARTMENT OF ZOOLOGY
In the fields of:—(a) AQUATIC ECOLOGY: Candidates should have research experience in aquatic systems, preferably in some aspects of resource production, decomposition, land water interactions, water chemistry or pollution. Experience in the tropics would be an advantage. (b) VERTEBRATE BIOLOGY: Candidates should have research experience in Vertebrate biology preferably in mamalogy, primatology, wild life biology, fish biology or fisheries. Experience in the tropics would be an advantage. (c) INVERTEBRATE ZOOLOGY. Preferably with experience in tropical ecosystems in South East Asia.

DEPARTMENT OF GENETICS AND CELLULAR BIOLOGY
In the fields of:—(a) PLANT CYTOGENETICS; (b) POPULATION/QUANTITATIVE GENETICS.

DEPARTMENT OF GEOGRAPHY
In one of the following fields:—Physical geography, urban geography, regional planning, transportation, population, quantitative techniques and aerial photo interpretation.

DEPARTMENT OF CHEMISTRY

DEPARTMENT OF PHYSICS

DEPARTMENT OF MATHEMATICS

Salary Scales (all inclusive; approx. stg. equivs.): £2,400 by £109 to £2,836/£3,163 by £109 to £3,381/Efficiency Bar £3,490 by £163 to £3,981/Review Point/£4,145 by £163 to £4,636 per annum.

Further particulars and application forms are obtainable from the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF.

The closing date for the receipt of applications is 2 August, 1975.

NEW ZEALAND

(DUNEDIN)

UNIVERSITY OF OTAGO

LECTURER OR SENIOR LECTURER IN ACCOUNTING AND FINANCE

Applications are invited for the post of LECTURER or SENIOR LECTURER in ACCOUNTING and FINANCE in the School of Business. The appointee will contribute to the teaching and research of the established school of Business in the areas of Accounting and Finance. Courses are presented at undergraduate, post-graduate and post-experience levels.

The appointment is to date from 1st February, 1976, or by arrangement from an alternative date.

Salary Scales: Lecturer NZ$7,787 to $9,948; Senior Lecturer NZ$10,007 to $12,748 with a bar at $11,718 per annum.

Further particulars are available from the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF, or from the Registrar of the University. Applications close on 31st July, 1975.

Professor T. K. Cowan, Dean of the Faculty of Commerce is at present in the UK and can [illegible]

MALAYSIA

UNIVERSITI SAINS MALAYSIA
Penang

ACADEMIC APPOINTMENTS

SCHOOL OF PHYSICS

A Chair in GEOPHYSICS requires a background and experience in General Exploration Geophysics, or Solid-Earth Geophysics, especially of the Upper Crust, to lend support and expertise in Mineral and Oil Exploration.

SCHOOL OF BIOLOGICAL SCIENCES

SENIOR LECTURER / LECTURER in the fields of: APPLIED PARASITOLOGY involving parasites of medical, veterinary, agricultural, fisheries or related fields, their economic importance, methods of prevention and control of parasitic diseases in the context of national development programmes.

APPLIED MICROBIOLOGY involving areas such as Medical and Veterinary Microbiology/or Food and Industrial Microbiology.

LECTURER in the field of SOIL SCIENCE with specialization in SOIL PHYSICS/PEDOLOGY.

SCHOOL OF CHEMICAL SCIENCES
LECTURER in the field of ORGANIC CHEMISTRY.

SCHOOL OF MATHEMATICAL SCIENCES
LECTURER in the fields of: PURE MATHEMATICS, APPLIED MATHEMATICS including OPERATIONS RESEARCH; COMPUTER SCIENCE.

CENTRE FOR EDUCATIONAL STUDIES
SENIOR LECTURER in the fields of: EDUCATIONAL METHODS in teaching CHEMISTRY and PHYSICS, EDUCATIONAL PHILOSOPHY, EDUCATIONAL SOCIOLOGY.

LECTURER in the fields of: EDUCATIONAL METHODS in teaching of the following subjects: HISTORY, GEOGRAPHY, LITERATURE, CHEMISTRY and PHYSICS, EDUCATIONAL PHILOSOPHY, EDUCATIONAL SOCIOLOGY.

Qualifications/Emoluments:
For the post of Professors and Senior Lecturers only candidates with Ph.D. in the fields mentioned together with postdoctoral experience in teaching, research and/or industries need apply. The post of Lecturers would require a minimum qualification of a Ph.D.

Salary range per annum: Professor, from *M$27,120 to M$36,000; Senior Lecturer, from M$23,300 to M$30,120 and Lecturer, from M$16,800 to M$26,880. Passage assistance for successful candidates, Provident Fund and Medical Benefits. Apply to Registrar, Establishment Section, Universiti Sains Malaysia, Minden, Penang, Malaysia. Enclose personal vitae and reference.

The closing date of receipt of application is August 4, 1975.

(*Check with your local bank for up-to-date exchange rate.)

MELBOURNE

THE UNIVERSITY

LECTURESHIP (CONTINUING) AND LECTURESHIP (LIMITED TENURE) IN SOCIOLOGY IN THE DEPARTMENT OF EDUCATION

The Department of Education is seeking to reorganise and consolidate its research and teaching in the area of educational sociology, and is offering two lectureships to cover the Sociology of the Family and the Sociology of Knowledge, to complement its existing strengths in Urban and Community Sociology.

Applicants should have research experience at doctoral level, and should be prepared to develop the department's research potential in their own area. All lecturers in sociology also take part in the department's initial teacher training programmes, so teaching experience at primary or secondary levels would be an advantage.

Salary range: $A11,665 to $15,646 per annum.

Information, including details of application procedure and conditions of appointment, is available from the Registrar, University of Melbourne, Parkville, Victoria, 3052, Australia, or from the Association of Commonwealth Universities (Appts), 36 Gordon Square, London WC1H 0PF.

Applications close on 7 August, 1975.

MANCHESTER

THE UNIVERSITY

TEMPORARY LECTURERS IN ECONOMICS

Applications are invited for one year posts from candidates with interests in any field of economics. Salary range per annum (under review) £2,118 to £2,580, plus threshold payments.

Further particulars and application forms (returnable by July 10th) from the Registrar, The University, Manchester M13 9PL. Quote ref.: 142/75/THES.

THE OPEN UNIVERSITY

THE FACULTY OF TECHNOLOGY

LECTURESHIP

Applications are invited for a post of LECTURER in the Faculty. The post is for two years and will be concerned with the maintenance of a course on Technology for Teachers and with the preparation of another course in the Faculty. Applicants should be graduates with experience of higher education. Appropriate staff on secondment from their present posts would be welcome.

Salary scale: £2,118 to £4,896 per annum (under review) plus a threshold payment of £230.64 per annum and membership of the Universities' Superannuation Scheme.

Application forms and further particulars are available from: The Personnel Manager (T.L2), The Open University, P.O. Box 75, Walton Hall, Milton Keynes, MK7 6AL.

Universities continued

MANCHESTER
THE UNIVERSITY

RESEARCH ASSISTANT IN THE DEPARTMENT OF SOCIAL ANTHROPOLOGY

Applications invited for this post tenable for two years in the first instance as part of an SSRC project under the supervision of Professor Jack Goody in the Department of Social Anthropology. Applicants should have a good honours degree and a higher degree in Social Anthropology and preferably have had some experience of fieldwork. The successful candidate will be required to take up duty as soon as possible.

Salary scale: £1,485 to £2,340 per annum (under review).

Further particulars and application forms (returnable by 31st July, 1975) from the Registrar, The University, Manchester M13 9PL. Quote ref. T.H.E.S.

NIGERIA
AHMADU BELLO UNIVERSITY

Applications are invited for posts at SENIOR LECTURER, LECTURER and ASSISTANT LECTURER in the DEPARTMENT of LIBRARY SCIENCE. Candidates should have a good honours degree and a higher degree in Library Science, plus adequate professional qualifications and experience for the teaching of this subject at university level. Preference will be given to those with experience in tropical Africa and familiarity with the problems of libraries in the following: Bibliography, Documentation and Classification, Reference Work and Information Sources.

Salary scales: Senior Lecturer, No. 9,660 to 10,740 to £11,775 per annum; Lecturer, No. 7,170 to 8,100 to £9,030 per annum; Assistant Lecturer, No. 5,400 to 6,330 to £7,260 per annum (salaries in U.K. sterling equivalent £1,967 to £2,304 to £2,642 per annum). The above salaries are subject to deductions of Nigerian income tax at source. Limited passage allowances are payable in certain cases. Limited housing allowances, subject to certain conditions, are also available.

Detailed applications (two copies), including a curriculum vitae and naming three referees, should be forwarded to the Registrar, Ahmadu Bello University, Zaria, Nigeria. Applicants resident in U.K. should also send one copy to the University Council, 36, Gordon Square, London, W.C.1. Further particulars may be obtained from either address.

NIGERIA
AHMADU BELLO UNIVERSITY

Applications are invited for the post of DIRECTOR in the INSTITUTE of EDUCATION (NEIU). Candidates should possess a doctorate degree in education, demonstrating administrative ability and a good record of research and publication. Special consideration will be given to those with experience in planning and building media. Applicants will direct the research work in the Institute, be responsible for the University's correspondence courses and in-service training, and senior staff and teaching practice supervision. He will be responsible for the University's audio-visual services and for the use of the University staff on the audio-visual aspects of teaching facilities and on the production of teaching materials.

Salary scale: N7,760 to N8,640 per annum (£5,760 to £6,420 per annum sterling). At present Government pay supplement salary is in approximate ratio, taking allowances, various allowances: superannuation scheme; biennial leave.

Detailed applications (two copies), including a curriculum vitae and naming three referees, should be forwarded to the Registrar, Ahmadu Bello University, Zaria, Nigeria. Applicants resident in U.K. should also send one copy to the University Council, 36, Gordon Square, London, W.C.1. Further particulars may be obtained from either address.

SHEFFIELD
THE UNIVERSITY

DEPARTMENT OF SOCIOLOGICAL STUDIES

Applications are invited for a post in the Department of SOCIOLOGICAL STUDIES tenable from 1st October, 1975, or as soon as possible thereafter.

Salary in range £3216 to £5004 per annum (under review) plus F.S.S.U. benefits.

Applications should have an interest in sociological theory, and should be sent by 1st August, 1975, to the Registrar, University of Sheffield, Sheffield S10 2TN, from whom further particulars may be obtained.

PAPUA NEW GUINEA
THE UNIVERSITY

GOROKA TEACHERS' COLLEGE

Applications are invited for the post of LECTURER/SENIOR LECTURER in MATHEMATICS. Applicants must possess a degree with a major in mathematics and have experience in secondary teaching or teacher training. A higher degree or other appropriate postgraduate qualification is desirable for appointment at the higher level. The duties of the appointee will be to teach courses 1, 2 and 3 in mathematics and in method courses in mathematics. Supervision of practice teaching assignments and guidance of student teachers would be required to take up duty as soon as possible.

Salary scales: Lecturer K5,574 to K7,746 per annum; Senior Lecturer K7,746 to K9,660 per annum; Head of Department K9,660 to K11,574 per annum (kina equivalent to £1,860 to £2,230 to £2,670 per annum). Initial salary will depend on qualifications and experience. Kina is at present on par with sterling. Superannuation scheme. Terminal gratuity of 30% of total salary earned. Free passages for appointee, wife and two children on first appointment and subsequent leave. Housing provided free of charge. Medical and dental services available free of charge.

Further particulars and application forms (returnable by 31st July, 1975) from the Registrar, The University, Papua New Guinea, Box 320, University P.O., Papua New Guinea.

SIERRA LEONE
THE UNIVERSITY

FOURAH BAY COLLEGE

Applications are invited for the post of LECTURER in PHYSICS.

The appointee will teach aspects of Fourah's literature to general degree students and to certain honours degree students, and will undertake research in pursuit of an honours degree or higher degree.

Salary scale: Le2,610 to Le2,970 to Le3,330 per annum (£2,088 to £2,376 to £2,664 per annum sterling); Senior Lecturer, Le3,960 to Le4,320 to Le4,680 per annum (£3,168 to £3,456 to £3,744 per annum sterling). Starting salary will depend on qualifications and experience. Gratuity at the rate of 15% of total salary earned. Passages for appointee, wife and two children on first appointment and subsequent leave. Housing provided free of charge. Medical and dental services available free of charge.

Detailed applications (two copies), including a curriculum vitae and naming three referees, should be forwarded to the Registrar, Fourah Bay College, University of Sierra Leone, Freetown, Sierra Leone. Applicants resident in U.K. should also send one copy to the Secretary, Inter-University Council, 29, Tavistock Square, London WC1H 9EZ. Further particulars may be obtained from either address.

SIERRA LEONE
THE UNIVERSITY

NJALA UNIVERSITY COLLEGE

Applications are invited for the post of DEMONSTRATOR in CHEMISTRY. The appointee will be based at the Njala campus. Applicants should have a higher degree and considerable experience in chemistry at university level.

Salary scale: Le 6,600-Le 7,680 per annum (£4,752 sterling equals Le 2). The British Government pay supplement (salaries) by £3,840 per annum (sterling) for a married expatriate or £1,656 per annum (sterling) for a single expatriate (normally free of all tax) and provide children's education allowances and holiday visit passages. These rates are under review; increases of 40% or 50 per cent are expected to be announced. Gratuity and will apply from April 1st, 1975. Partly-furnished accommodation at reasonable rate; superannuation scheme or provident fund; various allowances; family passage; biennial overseas leave.

Detailed applications (2 copies), including a curriculum vitae and naming three referees, should be sent by airmail, not later than July 31, 1975, to the Registrar, University of Sierra Leone, Freetown, Sierra Leone. Applicants resident in U.K. should also send one copy to Inter-University Council, 29, Tavistock Square, London WC1H 9EZ. Further particulars may be obtained from either address.

SOUTH AFRICA
UNIVERSITY OF THE WITWATERSRAND Johannesburg

FACULTY OF EDUCATION

SENIOR LECTURER/ LECTURER IN ENGLISH

Applications are invited for appointment to the above post. The appointee will be concerned with the training of secondary school teachers intending to teach English.

Salary scale: Lecturer R8,460-R11,280

Lecturer R6,300-R7,180.

The initial salary to be determined according to qualifications and experience.

Intending applicants should obtain the information letter relating to this post from the London Representative, University of the Witwatersrand, 276 High Holborn, London, W.C.1., before applying for the post. Applications should be sent to the Registrar, University of the Witwatersrand, 1 Jan Smuts Avenue, Johannesburg 2001 (airmail), not later than 30th July, 1975.

ULSTER
THE NEW UNIVERSITY

EDUCATION CENTRE

LECTURER IN EDUCATION

Applicants should have specialised in the study of primary education and have advanced qualifications and experience in primary education, or a related discipline. A knowledge of the special aspect of child development is required. School teaching experience, although not essential, would be considered highly advantageous.

Salary scale: (excluding threshold payments): £5,118 to £5,886 per annum (under review); with F.S.S.U. benefits. Preference will be given to an appointment at the lower end of the scale.

Further particulars may be obtained from the Registrar, The New University of Ulster, Coleraine, Northern Ireland (quoting ref. T.H.E.S.), to whom applications, including the names and addresses of two referees, should be sent by 16th July, 1975.

WEST INDIES
THE UNIVERSITY

TRINIDAD

Applications are invited for the post of SENIOR LECTURER and LECTURER in SOCIOLOGY.

For both the preference will be given to applicants whose qualifications and experience would enable them to teach courses in Sociological Theory, Social Psychology, Social Anthropology, Methodology and Statistics.

Salary scale: Senior Lecturer, $(W.I.) 18,000 to $21,600 to $25,200 per annum; Lecturer, $14,400 to $17,400 to $20,400 per annum. Salaries are subject to deductions of Trinidad and Tobago income tax at source. Gratuity at the rate of 12½% of total salary earned. Passages for appointee, wife and two children on first appointment and subsequent leave. Housing provided free of charge. Medical and dental services available free of charge.

Detailed applications (two copies), including a curriculum vitae and naming three referees, should be sent by airmail, not later than 31st July, 1975, to the Registrar, University of the West Indies, St. Augustine, Trinidad, West Indies. Applicants resident in U.K. should also send one copy to Inter-University Council, 29, Tavistock Square, London WC1H 9EZ. Further particulars may be obtained from either address.

ZAMBIA
THE UNIVERSITY

Applications are invited for the post of PROFESSOR of PHYSICS. Applicants must have extensive experience in research, university teaching and must have administrative ability. Preference will be given to applicants including the fields of research coincide with the interests of the Physics Department which include Electronics, Ceramics Research and Applications of Radioisotopes.

Salary Scale K7,300 to K7,860 per annum (£1 sterling equals K1). The initial salary will be fixed at the appropriate point in the scale according to qualifications and experience. Gratuity at the rate of 15% of total salary earned. Passages for appointee, wife and children under 21 years of age. Liberal leave. Housing provided free of charge. Medical and dental services available free of charge.

Detailed applications (two copies), including a curriculum vitae and naming three referees, should be sent by airmail, not later than 31st July, 1975, to the Registrar, University of Zambia, Lusaka, Zambia. Applicants resident in United Kingdom should also send one copy to Inter-University Council, 29 (3), Tavistock Square, London, WC1H 9EZ. Further particulars may be obtained from either address.

ST. ANDREWS
THE UNIVERSITY

DEPARTMENT OF APPLIED MATHEMATICS

Applications are invited for a post of POST-DOCTORAL RESEARCH ASSISTANT in the Department of Applied Mathematics, to work with Dr. A. D. Craik on Mode Interactions in Non-Linear Hydrodynamic Stability Theory. Preference will be given to candidates with a good knowledge of Fluid Mechanics. The post is tenable for two years.

Salary: on the S.R.C. scale, salary within the range £2,113 to £3,633 under review plus F.S.S.U. benefits.

Applications, with the names of three referees, should be sent to Dr. A. D. Craik, Department of Applied Mathematics, University of St. Andrews, St. Andrews, Fife, by 16th July, 1975.

Polytechnics

The Polytechnic of North London

Research Assistantship

Applications are invited for the post of RESEARCH ASSISTANT in Electronic and Communications Engineering. The successful candidate will join a team undertaking research into hybrid computer techniques for the analysis of nonlinear circuits, and will be expected to register for a higher degree of the C.N.A.A. Preference will be given to applicants with a good honours degree in Electrical Engineering or Applied Physics. The appointment will commence in September 1975, at a salary of £1,944, rising by two annual increments of £99 to £1,654, plus £331 London allowance; in addition the Threshold Agreement is applicable. Further particulars and application forms may be obtained from Dr. M. F. Brinson, The Polytechnic of North London, Prince Consort Road, London, N7 8DB (telephone No. 01-607 6767) to whom completed forms should be returned as soon as possible.

LONDON POLYTECHNIC ASSOCIATION

Applications are invited from young men or women GRADUATES with a view to commencing a career in Polytechnic Administration. The appointments are for two years' training in the Association's Headquarters Office in the executive day-to-day problems of a large and expanding Polytechnic. Experience of previous administrative experience is not essential but a good degree and a keen interest in the work of the Polytechnics are essential. Training will include responsibility for the Association's Annual Conference, attendance at meetings of the Academic Board and Council, and participation in elementary research into staffing and finance.

Salary scale: £2,610 to £3,330 per annum, rising thereafter by annual increments of £360 to £4,050 per annum. Starting salary will depend on the candidate's qualifications and experience at the discretion of the Secretary. Generous holiday entitlement. Superannuation scheme. Assistance with removal expenses.

Application forms, further particulars of the post and names of referees, should be sent by airmail, not later than 31st July, 1975, to the Secretary, London Polytechnic Association, 309 Regent Street, London, W1B 2UW. Further particulars may be obtained from either address.

WALES
THE UNIVERSITY

DEPARTMENT OF CELTIC STUDIES

Applications are invited for the post of Professor of Welsh History. Salary £5,118 to £6,054.

Further particulars can be obtained from the Registrar, University Registry, Cathays Park, Cardiff CF1 3NS, to whom applications (six copies) should be sent by 1st August, 1975.

SOUTH AFRICA
UNIVERSITY OF NATAL Durban

DEPARTMENT OF BIBLIOGRAPHY, LIBRARIANSHIP AND TYPOGRAPHY

Applications are invited from suitably qualified men and women for the posts of SENIOR LECTURER and JUNIOR LECTURER.

The Lecturer should be a graduate of a University with a degree in Bibliography, Librarianship or Typography and will be required to teach courses relating to these subjects. Private study facilities will be given to applicants who are registered for higher degrees in Bibliography, Librarianship or Typography.

The salary scales attached to the posts are as follows:

Senior Lecturer: R6,300 to R8,340 to R9,360 per annum. Junior Lecturer: R3,960 to R4,860 to R5,760 to R6,300 to R6,660 to R6,900 to R7,260 to R7,620 to R8,340 per annum.

The commencing salary notch will be dependent on the qualifications and/or experience of the successful applicant. In addition, an annual vacation gratuity equal to 1/12th of total salary is payable in accordance with the University regulations.

Application forms, further particulars of the post and information on pension, medical aid, study leave, housing loan and subsidy schemes, and passage and removal expenses on first appointment may be obtained from the Registrar, University of Natal, King George V Avenue, Durban, 4001, with whom applications, on the prescribed form, must be lodged not later than 30th July, 1975.

ULSTER
THE NEW UNIVERSITY

EDUCATION CENTRE

LECTURER IN EDUCATION

Applicants should have specialised in the study of primary education and have advanced qualifications and experience in primary education, or a related discipline. A knowledge of the special aspect of child development is required. School teaching experience, although not essential, would be considered highly advantageous.

Salary scale: (excluding threshold payments): £5,118 to £5,886 per annum (under review); with F.S.S.U. benefits. Preference will be given to an appointment at the lower end of the scale.

Further particulars may be obtained from the Registrar, The New University of Ulster, Coleraine, Northern Ireland (quoting ref. T.H.E.S.), to whom applications, including the names and addresses of two referees, should be sent by 16th July, 1975.

WEST INDIES
THE UNIVERSITY

TRINIDAD

Applications are invited for the post of SENIOR LECTURER and LECTURER in SOCIOLOGY.

For both the preference will be given to applicants whose qualifications and experience would enable them to teach courses in Sociological Theory, Social Psychology, Social Anthropology, Methodology and Statistics.

Salary scale: Senior Lecturer, $(W.I.) 18,000 to $21,600 to $25,200 per annum; Lecturer, $14,400 to $17,400 to $20,400 per annum. Salaries are subject to deductions of Trinidad and Tobago income tax at source. Gratuity at the rate of 12½% of total salary earned. Passages for appointee, wife and two children on first appointment and subsequent leave. Housing provided free of charge. Medical and dental services available free of charge.

Detailed applications (two copies), including a curriculum vitae and naming three referees, should be sent by airmail, not later than 31st July, 1975, to the Registrar, University of the West Indies, St. Augustine, Trinidad, West Indies. Applicants resident in U.K. should also send one copy to Inter-University Council, 29, Tavistock Square, London WC1H 9EZ. Further particulars may be obtained from either address.

BRIGHTON POLYTECHNIC

Reader

Applications are invited for the new appointment in the Faculty of Environmental Studies spanning the work of the Departments of Architecture and Interior Design and of Civil Engineering and Building. The Reader will have the opportunity not only to lead research within a particular specialist area but also to promote research on a wider scale over the fields of Historical, Building Design and Technological studies.

Applicants may be architects, architectural historians, builders or scientists with a proven research record in one of the fields of study and a general experience in the area of the built environment.

Salary Scale: £5,001-£6,429 per annum plus a threshold payment of £229 per annum. (Award pending.) Probably become £5,840-£7,579 incl. after confirmation of award.

Application forms and further particulars from the Bursar (S3/7) Brighton Polytechnic, Moulsecoomb, Brighton BN2 4GJ. Tel. 0273 67304, returnable by 25th July 1975.

City of Birmingham Polytechnic

School of Art Education

Applications are invited for the post of

HEAD OF DEPARTMENT

(GRADE V) (Re-advertisement)

Salary scale: £6,270-£7,038

Further details and application forms (to be returned by 1st September, 1975) from: The Personnel Officer, City of Birmingham Polytechnic (THES), Room T.310, Perry Barr, Birmingham B42 2SU.

Fashion Design

LECTURER GRADE II/ SENIOR LECTURER

Applications are invited from suitably qualified designers (Des. RCA. Dip AD). The successful applicant will be given responsibility for the co-ordination of work in the B.A. Hons. course in Fashion.

Salary: £2,670-£5,010 (Bar)-£5,412 plus £229.68 Threshold Payments.

For further details and form of application please send a self-addressed foolscap envelope to the

Chief Administrative Officer, Trent Polytechnic, Burton Street, Nottingham NG1 4BU.

Closing date 24th July, 1975.

(Incorporating Nottingham College of Education)

TRENT POLYTECHNIC NOTTINGHAM

THAMES POLYTECHNIC

School of Surveying
DIVISION OF CONSTRUCTION TECHNOLOGY AND BUILDING MANAGEMENT

SENIOR LECTURER

Applications are invited from suitably qualified Surveyors, Architects, Construction/Development Project Managers or Civil Engineers for the post of Senior Lecturer in the School of Surveying to teach Construction Technology and Management.

The School offers three 60a degree courses in Estate Management, Building Surveying and Quantity Surveying. The courses are granted the fullest recognition by the Royal Institution of Chartered Surveyors. Additionally part-time courses up to final examination level are provided for RICS and IOB examinations.

Suitable teaching and professional experience in appropriate fields is required. Facilities for research and the preparation for higher degrees are available.

Salary Scale: £4,206-£5,010 (Bar)-£5,412 plus £361 London allowance and payments under the threshold agreement, currently £229.68 per annum.

Further particulars and forms of application may be obtained from the Secretary, Thames Polytechnic, Wellington Street, London SE18 6PF to whom completed applications should be returned by 16 July, 1975

Oxford Polytechnic

Applications are invited for the post of

Lecturer-Senior Lecturer in Architecture

(£2670-£4206-£5412)

Further details and application forms from

Head of Department of Architecture, Oxford Polytechnic, Oxford OX3 0BP.

ABERDEEN
ROBERT GORDON'S INSTITUTE OF TECHNOLOGY

SCHOOL OF PHARMACY

LECTURER IN PHARMACEUTICS WITH AN INTEREST IN MICROBIOLOGY

With relevant academic, industrial or research experience. Removal expenses assistance. Salary range £3,819 to £6,495.

Details from Director, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen. Applications, with the names of two referees, should be sent to Dr. A. D. Craik, Department of Applied Mathematics, University of St. Andrews, St. Andrews, Fife, by 16th July, 1975.

Polytechnics continued

Vacancies at NELP

Applications are invited for the following posts:

ANGLIAN REGIONAL MANAGEMENT CENTRE
Department of Management Development
Principal Lecturer in Management Studies, to take responsibility for full-time and block release Diploma in Management Studies programmes. (Ref: S/AO.251 A)

Department of Services to Industry
Senior Lecturer in Marketing Management to take responsibility for and to teach courses in Marketing Management at post experience and post graduate level. (Ref: S/AO.251 B)

FACULTY OF HUMAN SCIENCES
Department of Social Work, Health and Nursing
Lecturer II with experience in Community Work and wishing to develop the teaching of Community Work on a two year C.Q.S.W. course and on the Social Work option of the four year C.N.A.A. BA (Hons) Sociology Course. Applicants should be either graduates in a relevant subject and/or professionally qualified Social Workers with experience of Student/Staff supervision. (Ref: S/AO.251 C)

OCCUPATIONAL PSYCHOLOGY UNIT
Lecturer II in Occupational Psychology. Candidates should have an interest in one or more of: Selection; Training; Working Conditions and Rewards; Industrial Relations, Job Design and Ergonomics. (Ref: S/AO.251 D)

FACULTY OF BUSINESS
Department of Applied Economics
Research Assistant required to join a team investigating the working of the small urban economy based on a chosen location initial appointment for two years. (Ref: S/AO.251 E)

DEPARTMENT OF LAW
Lecturer II in Law to teach on BA (Hons) degree in Law and a wide range of courses in Business and Social Sciences. Applicants should have an honours degree in Law and teaching experience would be desirable. (Ref: S/AO.251 F)
Salary scales:

Principal Lecturer	£5,001-£6,429
Senior Lecturer	£4,206-£5,412
Lecturer II	£2,670-£4,476
Research Assistant	£1,764-£1,866

(plus appropriate London Weighting and Cost of Living Safeguard)
Further details and application form from:
Academic Staffing Office (2), North East London Polytechnic, Forest Road, London E.17 4JB. Tel: 01-527 2272 Ext. 157.
Closing date: July 14. Please quote above reference no.

North East London Polytechnic

NEWCASTLE UPON TYNE POLYTECHNIC
Department of Behavioural Studies

Applications are invited for temporary appointments, initially for a period of two years and renewable annually thereafter, within the Department of Behavioural Studies.

LECTURER II IN SOCIOLOGY
(Three Posts)

The persons appointed will be required to teach at Degree level and should have an appropriate Honours Degree offering specialist knowledge in one of the following areas:
Sociological Theory/Social Philosophy
Social Institutions
Sociology of Deviance/Socio-legal Studies.

RESEARCH ASSISTANT

Applications are also invited from well qualified social science graduates for this post to assist in the development of a project which is concerned with the evaluation of shop steward training in the North East Region.
Salary Scales: Lecturer II, £2,670-£4,206 (bar)-£4,476.*
Research Assistant, £1,400-£1,700 (under review).*
* Plus threshold payment of £229.68.

For further particulars and application forms, returnable by 4th July, 1975, send stamped addressed foolscap envelope to the Staffing Officer, Newcastle upon Tyne Polytechnic, Ellison Building, Ellison Place, Newcastle upon Tyne NE1 8ST.

PRESTON POLYTECHNIC

Applications are invited for the posts detailed below, duties to commence on 1st September, 1975, or as soon as possible thereafter.

PRINCIPAL LECTURER (HEAD OF DIVISION OF SOCIAL ADMINISTRATION)
PRINCIPAL LECTURER in LAW
To be course Leader for the recently approved BA (Law) degree course
SENIOR LECTURER in ACCOUNTING
SENIOR LECTURER in BUSINESS STUDIES
SENIOR LECTURER/LECTURER II in LAW
SENIOR LECTURER/LECTURER II in ACCOUNTING
(Temporary Appointment)
LECTURER II in ACCOUNTING
LECTURER II in BUSINESS ORGANISATION
LECTURER II in MARKETING
LECTURER I or II in SOCIOLOGY
(Temporary Appointment)

The temporary appointments are for the period 1st September, 1975, to 31st August, 1976.

Salary Scales: Principal Lecturer: £5,001-£5,613-£6,429; Senior Lecturer: £4,260-£5,010-£5,412; Lecturer II: £2,670-£4,476; Lecturer I: £1,859-£3,633 (plus threshold payments and under review).

Application forms and further particulars are obtainable from the Chief Administrative Officer (Staffing), Preston Polytechnic, Corporation Street, Preston, PR1 2TQ. Closing date: July 11th, 1975.

The Polytechnic of North London

Communications Officer

The Polytechnic of North London is looking for a suitable person to fill the post of Communications Officer which becomes vacant on 1st September 1975 following the appointment of the present holder to another post.

Applicants should have a thorough knowledge of the press and other media. The successful candidate must have experience of editing and production of publications and a variety of information work.

The person appointed will be expected to display original and creative thinking in dealing with public relations in an institution of higher education. This will involve contact with senior officers throughout the Polytechnic and with national and local press, broadcasting media and local authorities.

The salary for the post is within the salary scale £3,045-£4,371 (plus £270 London Allowance).

Further details and application forms can be obtained from and should be returned to The Secretary, The Polytechnic of North London, Holloway, N7 8DB.

Closing date for receipt of applications is 14th July, 1975.

North East London Polytechnic

Interim Faculty of Art and Design

Senior Associate Lecturer in Scientific Photography. This post is suitable for someone with considerable professional experience of the scientific application of photography. Some teaching experience is desirable. The period of appointment is negotiable, but is unlikely to be for more than two years. (Ref. S/AO.250A)

Applications are also invited from an art historian for an associate lecturership to teach one day per week within the faculty. A specialist in the history of 20th Century painting and sculpture is desired. (Ref. S/AO.250B)

Salary Scale: Senior Lecturer, £4,206 to £5,412 (plus appropriate London Weighting and Cost of Living Safeguard).

Lecturer (part-time), £634 to £895 (plus appropriate London Weighting and Cost of Living Safeguard).

Further details and application form from:
Academic Staffing Office (2), North East London Polytechnic, Forest Road, London E.17 4JB. Tel: 01-527 2272, ext. 157.
Closing date, July 11, 1975. Please quote above reference number.

Leicester Polytechnic

School of Management
LECTURER II IN MANPOWER STUDIES
(Post No. 291)

to teach mainly on postgraduate and post-experience courses for mature students. Candidates should preferably hold a higher degree in Manpower Studies, together with suitable industrial experience.

Salary (under review):
£2,670-£4,476 p.a. with merit bar possibility, plus threshold payments.

Apply for further particulars and application form to: Staffing Officer, Leicester Polytechnic, P.O. Box 143, Leicester, LE1 9BH.

ABERDEEN
ROBERT GORDON'S INSTITUTE OF TECHNOLOGY

SCOTT SUTHERLAND SCHOOL OF ARCHITECTURE
BUILDING ECONOMICS SECTION

Lecturer in Quantity Surveying

for BSc (CNAA) Course and Diploma Course giving exemption from Quantity Surveying professional examinations

Applicants should be professionally qualified and experienced and have a progressive approach. Further study, research and consultancy are encouraged.

Salary in range £3,216-£6,495 per annum
Assistance with removal expenses.

Details from Director, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen, AB9 1FR

CITY OF LONDON
THE POLYTECHNIC

RESEARCH ASSISTANT IN PHYSICS

Applications are invited from graduates for research post in the department of Physics from 1 October, 1975, to work on either of the following topics:

LIQUID/POLYMER PHYSICS
Molecular relaxation orientation and diffusion in liquids and polymers using dielectric, flow birefringence and light scattering techniques.

THIN FILM SEMICONDUCTORS
Investigations of the device properties of thin epitaxial grown GaAs films and surface chemical analysis using secondary ion mass spectroscopy.

The successful applicant will be expected to register for a research degree.

Salary scale (under review): £1,849 to £2,145 plus £361 London Allowance, plus threshold £229.68.

PART-TIME POSTGRADUATE RESEARCH

The Department has a new intake in September, 1975, of students who wish to undertake part-time research leading to a higher degree. Research programmes are available in either Liquid/Polymer Physics or Thin Film Solid State Physics.

Further details and application forms are available from the Secretary of the Physics Department, City Polytechnic, Jewry Street, London EC3N 2EY (telephone 01-283 1030).

Closing date for applications 31 July, 1975.

CITY OF LONDON
THE POLYTECHNIC

DEPARTMENT OF SOCIAL SCIENCES

SENIOR LECTURER/LECTURER GRADE II

Applications are invited for the post of SENIOR LECTURER/LECTURER GRADE II (possibly part-time) in the Department of Social Sciences to teach courses in Social Psychology and Sociology. Applicants should be either graduates in a relevant subject and/or professionally qualified Social Workers with experience of Student/Staff supervision.

Salary Scales: Senior Lecturer, £4,206 to £5,412 (plus appropriate London Weighting and Cost of Living Safeguard).

Lecturer II, £2,670-£4,476 (plus appropriate London Weighting and Cost of Living Safeguard).

Further details and application form from:
Academic Staffing Office (2), North East London Polytechnic, Forest Road, London E.17 4JB. Tel: 01-527 2272, ext. 157.
Closing date, July 11, 1975. Please quote above reference number.

WALES
GLAMORGAN POLYTECHNIC
POLYTECHNIC MORGANNWG
(Incorporating Glamorgan College of Education)

Applications are invited for the following posts:—

DEPARTMENT OF SOCIAL STUDIES
SENIOR LECTURER/LECTURER GRADE II
CAREERS EDUCATION (equivalent to experienced Careers Teachers)

DEPARTMENT OF ARTS AND LANGUAGES
PRINCIPAL LECTURER FRENCH
TOPOGRAPHY SENIOR LECTURER/LECTURER Grade II FRENCH

DEPARTMENT OF MANAGEMENT STUDIES
PRINCIPAL LECTURER/ SENIOR LECTURERS
BUSINESS POLICY

SENIOR LECTURERS/LECTURERS GRADE II (2 posts) MANPOWER MANAGEMENT HEALTH SERVICE MANAGEMENT
LAW

SENIOR LECTURER
GENERAL MANAGEMENT STUDIES

DEPARTMENT OF BUSINESS STUDIES
SENIOR LECTURER/LECTURER Grade II
LAW
LECTURER Grade II
QUANTITATIVE ECONOMICS

DEPARTMENT OF CIVIL ENGINEERING AND BUILDING
SENIOR LECTURERS/LECTURERS Grade II (2 posts)
Preference will be given to applicants interested in one or more of the following:
STRUCTURAL ENGINEERING (CONSTRUCTION)
BEHAVIOUR OF STRUCTURES
STRUCTURAL ANALYSIS
PUBLIC HEALTH ENGINEERING

DEPARTMENT OF ESTATE MANAGEMENT AND QUANTITY SURVEYING
SENIOR LECTURER/LECTURER Grade II (2 posts)
ESTATE MANAGEMENT/ VALUATION (conditions must be compatible with those of R.I.C.S.)
QUANTITY SURVEYING
SENIOR LECTURER
TOWN PLANNING

DEPARTMENT OF EDUCATION
SENIOR LECTURER/LECTURER Grade II
EDUCATION (applicants must have a degree in Education, Sociology or Psychology)

DEPARTMENT OF MINING AND LAND SURVEYING
SENIOR LECTURER/LECTURER Grade II
MINING

Salaries—Principal Lecturer £6,930 to £8,844 to £9,858; Senior Lecturer £5,859 to £7,344 to £8,358; Lecturer II £4,788 to £5,841; Lecturer Grade II £3,859 to £4,872.

Further particulars and application forms returnable by 18th July, 1975, may be obtained from:—

The Secretary (Appointments Officer), Glamorgan Polytechnic, Pontypridd, Mid Glamorgan CF37 1DL.

WOLVERHAMPTON
THE POLYTECHNIC

LECTURER IN MICROBIOLOGY (Grade II)

Candidates should possess a good honours degree in Microbiology or Microbiology with postgraduate experience in research and/or industry. An interest in dentistry or medical aspects of the subject may be an advantage.

LECTURER IN LAW (Grade II)

A lecturer in law is required to teach on the B.A. (Hons.) law degree, and on other degree and diploma courses. Newly qualified applicants will be considered for appointment on the Grade I scale.

Salary scale: £3,045-£3,819 per annum (£2,877 per annum to £4,233 per annum).

Plus, threshold allowance.

Both posts available from 1st September, 1975.

Application forms and further particulars from the Secretary, The Polytechnic, Wolverhampton WV1 1LY.

GLAMORGAN POLYTECHNIC, Pontypridd

Polytechnic Morgannwg (Incorporating Glamorgan College of Education)

Administrative Officer
Salary up to £5,859 (inclusive of threshold supplement)

Applications are invited from graduates or persons with an equivalent qualification for two posts. Relevant post qualification experience is an advantage. Appointment will be made on the scale of Administrative Assistant in either the Department of Industrial and Production Engineering or the Department of Management Studies but opportunities to gain experience and contribute within a wider administrative context will be provided. The posts are in the Technical/APT grade: starting salary dependent on qualifications and experience. Further particulars and application forms (returnable by 11th July, 1975) may be obtained from the Personnel Officer, Glamorgan Polytechnic, Llantwit Road, Treforest, Pontypridd CF37 1DL. Tel. No. Pontypridd 405244.

HERTFORDSHIRE
THE HATFIELD POLYTECHNIC

TELECOMMUNICATIONS AND INFORMATION SCIENCES RESEARCH

Research activities in the fields of telecommunications and microelectronics continue to expand and there are now excellent facilities supported by the Science Research and Development Establishment, Government Communications Headquarters, the Post Office Research Centre and the British Library Research and Development Department.

Opportunities are available for suitably qualified graduates to join RESEARCH STUDENTS to join three major areas of work in the following fields:

(a) Application of coding theory in data communications, with particular emphasis on digital coded communication in mobile communications.

(b) Digital processing in facsimile systems.

(c) Automatic retrieval and retention display of microform images.

(d) Signal processing and recording systems.

(e) Optical and opto-electronic fabrication techniques.

For further information and application forms please write to Dr. Reed, Department of Engineering, The Hatfield Polytechnic, P.O. Box 109, Hatfield, Herts AL10 9AB. Please quote ref. T.H.E.S.

Closing date: 11th July, 1975.

HAMPSHIRE
PORTSMOUTH POLYTECHNIC

DEPARTMENT OF ECONOMICS AND ECONOMIC HISTORY

MARINE RESOURCES RESEARCH UNIT

RESEARCH ASSOCIATE/ RESEARCH FELLOW

Temporary post in RESEARCH COUNCIL in the MARINE RESOURCES Research Unit, to commence September 1975 or as agreed date, for a fixed-term of two years.

Candidates should be qualified in Economics and possess a higher degree. The post offers an unusual opportunity to those who is initial and develop research in co-operation with a small inter-disciplinary group interest in fisheries economics. It also involves contributing to on-going research programmes.

The appointment will be at an appropriate level dependent on the qualifications and experience of the successful applicant.

Salary scales (research Assistant £3,160 to £3,858 per annum (under review) Research Fellow £3,858 to £5,859 per annum plus threshold payments).

Application forms and further particulars may be obtained from the Staff Officer, Portsmouth Polytechnic, Lion Gate House, Museum Road, Portsmouth (telephone 0705 827681). Completed applications should be returned by 11th July, 1975.

STAFFORDSHIRE
NORTH STAFFORDSHIRE POLYTECHNIC

FACULTY OF ART AND DESIGN

GLASS MAKER AND DESIGNER

Glass is a new Main Option study within the Multi-Discipline Design Course leading to the Diploma and B.A. (Hons.).

Applications are invited from practising designers for the post of Glass Maker and Designer. Applicants must have a minimum of two years' practical experience. Starting date September, 1975.

Salary scale is approximately £68 per day. Details of pension scheme available on request. Applications in the form of a letter, giving particulars of age, qualifications and experience, should be sent to: The Head of Department, Design, Caverswall Road, Blurton, Stoke-on-Trent, Staffs ST3 3DW. Closing date for receipt of applications is 14th July, 1975.

SUNDERLAND
THE POLYTECHNIC

FACULTY OF HUMANITIES

DEPARTMENT OF LANGUAGES AND CULTURES

LECTURER II/SENIOR LECTURER in LINGUISTICS (One post)

The person appointed will teach English Language on the certificate of Education B.Ed. and Combined Studies courses offered by the department. Linguistics and English Language are important elements in the B.A. Communications degrees planned for the department. Applications from graduates will be an advantage. The post is available from 1st September, 1975, or as soon as possible thereafter.

FACULTY OF ART AND DESIGN

LECTURER II/SENIOR LECTURER in PAINTING (One post)

Applicants should be practising painters with a first or second class honours degree (B.A. (Fine Art) level).

Lecturer Grade II: £2,670 by £132.30 to £4,206 (salary under review) and Senior Lecturer £4,206 by £132.30 to £5,412 per annum (salary under review).

Senior Lecturers £4,206 by £207 to £4,620 (under review) to £5,412 per annum.

Threshold payments are additional.

Further particulars and application forms are available from the Personnel Officer, Sunderland Polytechnic, Priestman Building, Green Terrace, Sunderland SR1 3SD. Completed forms should be returned by 18th July, 1975.

Application forms and further particulars may be obtained from the Secretary, The Polytechnic, Wolverhampton WV1 1LY.

Polytechnics continued

The Polytechnic of North London

Department of Sociology 62/66 Highbury Grove, N.5.

Research Assistant

Inflation-Research Project

Applications are invited for the post of Research Assistant in the Department of Sociology at the Polytechnic of North London, to participate in a staff group Research Project to investigate the socio-economic factors influencing theory and police regarding post-war inflation.

Applicants should hold a first degree in one of the following:

Economics / Sociology
Political Economy / Labour History / Economic History.

The successful candidate will show competence in two or more socio - economic disciplines.

The post will be initially for one year, from 1st October, 1975.

Salary Scale: £1,544 x £55 £1,654 plus £351 London Allowance. In addition the Threshold Agreement is applicable.

Further particulars and application forms from the Head of the Department of Sociology, 62/66 Highbury Grove, London N5 2AD.

Enquiries to Mr. Purton (01-359 0941).

Closing date for applications —31st July, 1975.

OXFORD POLYTECHNIC

Lecturer Senior Lecturer in HUMAN GEOGRAPHY

(£2,670-£4,206-£5,412)

Temporary appointment for one year from September, 1975. To contribute to the teaching on the CNAA Modular degree, with special reference to Spatial Analysis and Political Geography

Further details and application forms from:

The Secretary,
Department of Arts & Languages,
Oxford Polytechnic,
Oxford OX3 0BP

BRISTOL
BRISTOL POLYTECHNIC
DEPARTMENT OF HUMANITIES
RESEARCH ASSISTANT IN ANTHROPOLOGY IN EDUCATION

Applications are invited from candidates with suitable qualifications and experience to participate in the research project of the Royal Anthropological Institute into the teaching of [illegible] in multi-racial primary schools. The appointment will be for a period of 2 years in the first instance. Salary £2,856 - £3,369 + £351 London Weighting (under review).

Further details and application forms from the Head of the Department of Sociology, 62/66 Highbury Grove, London N5 2AD. Enquiries to Mr. Purton (01-359 0941).

Closing date for applications —31st July, 1975.

LEICESTER
LEICESTER POLYTECHNIC
SCHOOL OF BIOLOGY
[illegible] IN BIOLOGY
Ref. No. 7/75

Applicants should be graduates in Biology or a related science and possess a higher degree or professional qualification. Duties include responsibility for teaching to first degree level in the [illegible] and for Environmental and Ecological courses.

Salary (under review): £2,670-£4,476 p.a. (Lecturer II) plus £351 London Weighting Allowance.

Apply for further particulars and application forms to the Personnel Officer, The Polytechnic, Leicester LE1 9BH.

BIRMINGHAM
CITY OF BIRMINGHAM POLYTECHNIC
DEPARTMENT OF BUSINESS STUDIES AND FINANCE

Applications are invited for the following posts:

LECTURER I/II to INDUSTRIAL ECONOMICS to teach on business studies and professional courses, with the opportunity to lead to higher degree studies. Previously to CNAA degree students in Accountancy and Business Studies. Applicants should hold a good degree in Economics or Business Studies with some business and/or teaching experience.

LECTURER I/II in ACCOUNTING to teach on degree, diploma and professional courses.

Applicants should hold a recognised professional qualification and/or a degree. Teaching experience an advantage but not essential.

Salary scales: Lecturer II £2,670-£4,176. Lecturer I £3,156-£3,663. Under review.

Further details and application forms (to be returned by 18th July, 1975) from The Personnel Officer, City of Birmingham Polytechnic, 295/315 Dudley Road East, Birmingham B18 7RU.

HERTFORDSHIRE
THE HATFIELD POLYTECHNIC
LECTURER II IN SOCIAL WORK
(One post)
Re-advertisement

The Polytechnic's main social work course is the initial social work element of a full-time degree course in Applied Social Studies. The successful candidate(s), who may be drawn from any branch of social work, will be members of a team of social work tutors, all of whom have the opportunity to develop their own teaching interests. Research, consultancy and other kinds of continuing field contact are also encouraged and both posts are permanent and available from a date to be agreed not earlier than 1 September but candidates from suitably qualified persons interested in a possible one-year temporary appointment will also be welcomed.

Informal discussion about these posts may be made in the School of Social Sciences Office, Hatfield 68100, Extension 347.

Salary Scale £3,279+ to £3,867 plus local weighting allowance.

Starting salary may be related to qualifications and experience.

Application form and further details from the Station Office, The Hatfield Polytechnic, P.O. Box 109, Hatfield, Herts AL10 9AB, or telephone Hatfield 68100, Extension 329. Closing date 21 July, 1975. Please quote reference 5/6.

LONDON
THE POLYTECHNIC OF CENTRAL LONDON
SCHOOL OF LAW
HEAD OF DEPARTMENT
Chairman's Grade V

There is vacancy in the leadership of a progressive Department of Law. Responsibility for the development of part-time law degree, full-time degree, full-time courses, courses and other professional and professional legal studies.

This is a full-time appointment.

SCHOOL OF THE SOCIAL SCIENCES AND HUMANITIES

LECTURER II IN ECONOMICS

Applications are invited from specialists in any branch of economics, but an ability to offer post-graduate economics might be an advantage. Relevant practical experience desirable.

LECTURER II IN GEOGRAPHY

Preference may be given to specialists in Economic Geography.

LECTURER II IN HISTORY

Applications are invited from specialists in (a) Nineteenth and Twentieth-Century British and European history and (b) American History. The appointment may be for one year only.

In each case applicants should hold a good honours degree in an appropriate discipline, and preferably a postgraduate qualification. Ability to teach to honours degree level is essential. Opportunities for research will be encouraged. Consideration will be given to candidates who can bring evidence of, or potential for, success in the following interrelated areas: the school's developing interest in the B.A. (Social Sciences) degree, teaching in the evening environment, curriculum development, broadly-based education, part-time education, and the Social Studies Degree. The appointments will take effect from 1st September 1975 or as soon as possible thereafter.

Salary (under review) Grade II: £2,661 to £3,500 (under review) Lecturer I: £3,156 to £3,702 (under review) plus threshold agreement for these posts.

Further details and application forms from the Personnel Officer, The Polytechnic of Central London, 309 Regent Street, London W1R 8AL. Telephone 01-580 2060 Extension 2060. Closing date for applications 21st July, 1975. Please quote reference 5/75.

LONDON
THE POLYTECHNIC OF NORTH LONDON
DEPARTMENT OF ENVIRONMENTAL DESIGN
SENIOR LECTURER IN TOWN PLANNING

Applications are invited from candidates possessing qualifications and experience to participate in the Town Planning Studies Option, part of the Environmental Design course. The successful candidate will be expected to take a responsible role in the development of the existing and new courses in the option. Applicants should have an interest in the design aspects of town planning and would be advantageous.

Salary scales: £3,366 to £4,041 (as at 1/10/74) plus £351 London Weighting Allowance and threshold payments (under review) as appropriate.

Apply for further particulars and application forms to the Personnel Officer, The Polytechnic of North London, Prince of Wales Road, London NW5 3LB. Telephone 01-607 2789 Extension 2789. Closing date for applications 21st July, 1975.

NOTTINGHAM
THE NOTTINGHAM POLYTECHNIC
STAFF VACANCIES
DEPARTMENT OF BUSINESS AND PROFESSIONAL STUDIES

L.E.C. GRADE II, Grade II or SENIOR LECTURER in ACCOUNTING and BUSINESS STUDIES.

Qualified accountants are required to teach on degree and professional courses.

DEPARTMENT OF CIVIL AND STRUCTURAL ENGINEERING

L.E.C. GRADE II, Grade II or SENIOR LECTURER in CIVIL ENGINEERING (two posts).

To assist with the lecture, tutorial and laboratory work for all years of courses including the honours degree course in Civil Engineering.

DEPARTMENT OF ECONOMICS AND PUBLIC ADMINISTRATION

L.E.C. GRADE II Grade II or SENIOR LECTURER in ECONOMICS.

With particular interest in Economic theory although other specialisms will be considered, to teach to degree and diploma course throughout the Polytechnic.

DEPARTMENT OF LIFE SCIENCES

L.E.C. GRADE II, Grade II or SENIOR LECTURER in MICROBIOLOGY (preferably applied microbiology).

L.E.C. GRADE II, Grade II or SENIOR LECTURER in PHARMACEUTICAL CHEMISTRY.

L.E.C. GRADE II, Grade II or SENIOR LECTURER in BIOCHEMISTRY.

Salary £2,670 to £5,010 (Lecturer II, £3,213 per annum plus £351 per annum threshold payments).

For further details and form of application please send a self-addressed foolscap envelope to the Chief Personnel Officer, Trent Polytechnic, Clifton, Nottingham NG11 8NS. Closing date 31st July, 1975.

PORTSMOUTH
THE POLYTECHNIC
CAREERS ADVISER

Applications are invited from men and women for this newly established post. The Careers Adviser will work with the Senior Careers Adviser and alongside the Student Counsellor. This post has been created so that the careers work at Portsmouth can be extended, and that professional help may be available to a greater number of the students in need.

Applicants should preferably be graduates, with experience of careers work in further or higher education or with school pupils in schools. Other relevant training or experience will be considered.

Salary scale: £2,670 to £4,206 (efficiency bar) to £5,010, plus threshold payments of £299.61 per annum. Starting salary according to experience.

Application forms and further particulars may be obtained from the Staff Officer, Portsmouth Polytechnic, Burnaby House, Museum Road, Portsmouth, PO1 2QQ, to whom completed applications should be returned by 14th July 1975.

PORTSMOUTH
PORTSMOUTH POLYTECHNIC
DEPARTMENT OF GEOLOGY

Applications are invited for the post of RESEARCH ASSISTANT to investigate aspects of the sedimentology and geochemistry of Cretaceous limestones in southern England.

Applicants should have (or expect to be about to gain) a good honours degree in Geology and Chemistry. The successful candidate will be expected to register for a higher degree of the C.N.A.A.

Salary within range £2,330 to £3,420 (under review) plus threshold payments. The appointment is for a fixed-term.

Application forms and further particulars may be obtained from the Staff Officer, Portsmouth Polytechnic, Burnaby House, Museum Road, Portsmouth, PO1 2QQ, to whom completed applications should be returned by 14th July 1975.

ULSTER
ULSTER COLLEGE
THE NORTHERN IRELAND POLYTECHNIC
FACULTY OF SCIENCE
SCHOOL OF MATHEMATICS AND COMPUTER SCIENCE
LECTURER II SENIOR LECTURER

Applications are invited for the above posts. Duties will include participation in undergraduate courses in Computer Science and Mathematics, particularly Applied Mathematics, Numerical Analysis, Statistics and Physics and research in one of these areas. Applicants should have a good honours degree and preferably a higher degree or professional qualification. Some experience of computer programming would be desirable.

Salary Scale: £2,670 to £4,206 (efficiency bar) to £5,010 (under review) plus £351 London Weighting Allowance.

Application forms and further particulars may be obtained from the Secretary, Ulster College, Cromore Road, Coleraine, Co. Londonderry, BT52 1SA. Telephone Coleraine 4141. Closing date for receipt of applications 31st July, 1975.

LONDON
THE POLYTECHNIC OF NORTH LONDON
DEPARTMENT OF ENVIRONMENTAL DESIGN
SENIOR LECTURER IN TOWN PLANNING

Applications are invited from candidates possessing qualifications and experience to participate in the Town Planning Studies Option, part of the Environmental Design course. The successful candidate will be expected to take a responsible role in the development of the existing and new courses in the option. Applicants should have an interest in the design aspects of town planning and would be advantageous.

Salary scales: £3,366 to £4,041 (as at 1/10/74) plus £351 London Weighting Allowance and threshold payments (under review) as appropriate.

Apply for further particulars and application forms to the Personnel Officer, The Polytechnic of North London, Prince of Wales Road, London NW5 3LB. Telephone 01-607 2789 Extension 2789. Closing date for applications 21st July, 1975.

PORTSMOUTH
THE POLYTECHNIC
DEPARTMENT OF GEOLOGY

Research Assistantship in Engineering Geology and Geomechanics, starting in September. The research is intended to lead to a higher degree and will involve investigation of the influence of joints and joint systems upon rock mass behaviour at the site of foundations and in mining and tunnelling environments.

Applicants will be considered from those about to graduate, in geology or engineering geology who have an interest or experience in geomechanics and measuring techniques, with preference to those with joint economics, or with joint honours in physics and geology. Non-graduate persons may be required to attend appropriate courses of lectures here in the polytechnic.

Salary within the range £2,330 to £3,420 (under review) plus threshold payments. The appointment will be for a fixed term.

Application forms and further details obtainable from the Personnel Officer, Sheffield Polytechnic, Hallam House, Fitzalan Square, Sheffield, S1 2BU, to whom completed forms should be returned within fourteen days.

MANCHESTER
THE POLYTECHNIC
FACULTY OF COMMUNITY STUDIES
DEPARTMENT OF EDUCATION

GR/165/5 RESEARCH ASSISTANT

Required from 25 September for work in connection with the Downtown's Project on language and dialect amongst West Indian Children. Graduates from Schools. Candidates should be graduates with specialisation in either Sociology or Linguistics with an interest in the study of language and cross cultural communication, statistical research methods, six hours' tutorial work per week with an evening and Saturday commitment. A candidate will be encouraged to register for a higher degree.

Salary Scale: £2,191 to £2,547 (as at 1/10/74).

GR 166/5 PROJECT ASSISTANT

Required from 25 September, one year, with possibility of extension, for work on the collection and analysis of data for a research project on the attitudes of the development of Polytechnic to its new clientele. Graduates, or equivalent, in Sociology, Psychology or Statistics should be graduates, or qualified by experience, with suitable experience. Some knowledge of computer programming would be advantageous.

Salary Scale £2,191 to £2,547 (as at 1/10/74).

GR/167/5 PROJECT ASSISTANT

Required from 25 September, one year, with possibility of extension, for work on a research project into the effects of changing the social environment on the attitudes of pupils in schools. Other relevant training or experience will be considered.

Salary scale: £2,191 to £2,547 (as at 1/10/74).

The Polytechnic occupies a unique and attractive site in the centre of Manchester, with excellent communications, and is currently undergoing a substantial development programme. Accommodation for staff is available, and there is a scheme of assistance with removal expenses.

Further particulars and application forms which must be returned by July 21, may be obtained from the Staff Officer, Polytechnic of North London, Prince of Wales Road, London NW5 3LB. Please quote reference 5/75.

SHEFFIELD
SHEFFIELD POLYTECHNIC
DEPARTMENT OF MATHEMATICS AND COMPUTING SCIENCE
DEGREE IN SOCIAL MATHEMATICS
SENIOR LECTURER IN SOCIAL STATISTICS
LECTURER II SENIOR LECTURER IN INTERNATIONAL RELATIONS

Salary Scales: Reader, £6,417 to £6,957; Senior Lecturer, £5,010 to £5,607; Lecturer II, £3,213 to £5,010; Lecturer I, £2,670 to £3,213.

All salaries plus threshold payment

Application forms and further details obtainable from the Personnel Officer, Sheffield Polytechnic, Hallam House, Fitzalan Square, Sheffield, S1 2BU, to whom completed forms should be returned within 14 days.

SHEFFIELD
THE POLYTECHNIC
DEPARTMENT OF HEALTH AND SOCIAL SECURITY
NATIONAL HEALTH SERVICE
LEARNING RESOURCES UNIT
RESOURCES DEVELOPMENT OFFICER

This Unit assists in the promotion of training technology in the N.H.S. on a national basis by developing learning materials and teaching aids for nurses, running courses for nurse teachers and providing an information service for them.

The person appointed will take part in the general work of the Unit and have the opportunity to acquire skills in training technology, produce learning teaching materials and conduct applied research into their effective use.

Applications for this interesting and challenging post within an established team, are invited from experienced nurse teachers, preferably with a recognised teaching qualification.

Salary Scale: Lecturer II: £2,670 to £4,476. Plus threshold payment.

Application forms and further details obtainable from the Personnel Officer, Sheffield Polytechnic, Hallam House, Fitzalan Square, Sheffield, S1 2BU, to whom completed forms should be returned within fourteen days.

Fellowships and Studentships

PAISLEY COLLEGE

RESEARCH STUDENTSHIPS

Paisley College invites applications from graduates for Research Studentship leading to CNAA Awards of M.Phil. or Ph.D. Opportunities are available in the following Departments of the College:

Biology
Chemistry
Physics
Maths & Computing
Civil Engineering
Mechanical Engineering
Electrical Engineering
Social Studies
Economics & Management

Grants similar to SRC rates are payable to successful applicants.

For full details of projects and topics available please telephone or write to:

The Secretary (Postgraduate Studies),
Paisley College,
High Street,
PAISLEY PA1 2BE.
Tel: 041-887 1241.

PAISLEY COLLEGE — A SCOTTISH CENTRAL INSTITUTION

ABERDEEN
THE UNIVERSITY
S.R.C. STUDENTSHIPS

The University of Aberdeen invites applications from suitably qualified graduates with good honours degrees for S.R.C. grants are also available for research in the following departments:—

GEOGRAPHY.
POLITICAL ECONOMY.
POLITICS.
SOCIOLOGY.

Persons wishing to be considered for nomination to these awards should communicate as soon as possible with the Head of the Department concerned, King's College, Aberdeen.

DURHAM
THE UNIVERSITY
PHYSICAL CHEMISTRY/SPECTROSCOPY

Applications are invited from chemistry or chemical physics graduates (or those about to graduate in 1975) for a post-graduate studentship (to begin in the first instance) for one year under the supervision of Dr. J. Yarwood. The studentship is sponsored by Perkin-Elmer Ltd. and is for the investigation of new applications of the infra-red spectroscopy. (The project involves both instrumental and computer programming development for the PE7500 interfaced minicomputer and studies of optical properties of liquids and solutions). The chemistry involved is mainly concerned with the study of molecular association and molecular interactions in condensed phases.

The studentship will be of the same value as an SRC award. The successful candidate will have a good background in physical chemistry and mathematics and will be expected to register for a M.Sc.

Applications, along with a brief statement of academic record and the names of two referees, should be sent to Dr. J. Yarwood at the Chemistry Department, University of Durham, South Road, DH1 3LE, as soon as possible.

LONDON
CENTRE FOR SCIENCE EDUCATION
Chelsea College, University of London

EDUCATIONAL RESEARCH

Applications are invited for an S.S.R.C. STUDENTSHIP commencing in October 1975. Candidates must satisfy the S.S.R.C. conditions of eligibility and normally should hold or be expecting to obtain a first or upper second class honours degree.

The Centre's research interests are chiefly in the fields of science and mathematics education at all levels, but research is also in progress in educational technology, history of education, and the psychological aspect of education, etc.

Applications, including curriculum vitae, the names of two referees and a brief outline of the candidate's proposed area of research should be sent to Professor R. W. Richardson, Director, Centre for Science Education, Chelsea College, Bridges Place, London SW6 4HR, as soon as possible.

LONDON
DAVY FARADAY RESEARCH LABORATORY
THE ROYAL INSTITUTION
RESEARCH STUDENTSHIPS IN CHEMISTRY

Applications for the above Studentships (value £900 per annum) are invited from Honours graduates who expect to obtain a First or Upper Second Class Honours degree. Successful applicants will be offered the opportunity to pursue research in the Davy Faraday Laboratory, may register as internal candidates for the Ph.D. degree of London University, and may be required to lecture, demonstrate or supervise practicals in undergraduate courses.

Applications and requests for further particulars to Dr. George Porter, F.R.S., The Royal Institution, 21 Albemarle Street, London W1X 4BS.

BRADFORD
THE UNIVERSITY
SSRC RESEARCH STUDENTSHIP IN SOCIOLOGY

Applications are invited as early as possible from candidates holding or expecting to obtain this summer a first or upper second class honours degree in Sociology for a two year studentship commencing October, 1975.

Further details and application forms from Mr. G. H. Littlejohn, Postgraduate School of Social Sciences, University of Bradford, West Yorkshire BD7 1DP, quoting ref. 36/SSC/TH.

LONDON
BEDFORD COLLEGE (University of London)
Regent's Park, London NW1 4NS

Applications are invited from graduates in Physiology or Human Biology for a studentship in the Department of Physiology, tenable from October 1975. Initially for one session, the Science Research Council will be prepared to consider a further grant of three years' duration. The successful candidate will be required to undertake a research project in the field of neurophysiology.

Further particulars and application forms from Dr. A. Ullman, Department of Physiology, Bedford College, Regent's Park, London NW1 4NS. Telephone 01-486 4400, Extension 313. Closing date for applications 14th July, 1975.

EDINBURGH
EDINBURGH UNIVERSITY STUDENTS' ASSOCIATION
PROJECT RESEARCHER

Applications are invited for a PROJECT RESEARCHER to carry out a two year, [illegible] research project, sponsored by the Students' Representative Council, into the personal [illegible] of students transferring from the school to university under the direction of the Student Counselling Service and the Assistant Director of Education (Research and Development). Applicants should possess an honours degree or equivalent professional qualifications and preferably have had industrial, professional or teaching experience.

Further particulars may be obtained from the Secretary, Edinburgh University Students' Association, 5 Bristo Place, Edinburgh EH1 1EZ, to whom completed forms should be returned by 15th August, 1975. Please quote reference 7010.

Universities continued

THE OPEN UNIVERSITY
FACULTY OF TECHNOLOGY
LECTURER IN DESIGN

Applications are invited for a Lecturer in Design with particular interest in computer-aided design and in the control of [illegible] systems. Applicants should have had industrial experience of design and should be prepared to participate in the preparation of courses for degree level examinations, to assist in supervision of student project work and contribute to departmental and [illegible] research activities.

Salary scales: £3,213 to £4,041 (under review) plus £351 London Weighting Allowance and threshold payments as appropriate. Starting salary according to experience.

Further particulars and application forms from Mr. G. H. Littlejohn, Postgraduate School of Social Sciences, University of Bradford, West Yorkshire BD7 1DP, quoting ref. 36/SSC/TH.

GALASHIELS
SCOTTISH COLLEGE OF TEXTILES
DEPARTMENT OF MANAGEMENT STUDIES
LECTURESHIP IN INDUSTRIAL ORGANISATION

Applications are invited from suitably qualified persons for a lectureship in Industrial Organisation. It is essential that the successful applicant has a comprehensive knowledge of Industrial Organisation will be necessary to carry out the requirements of this appointment.

Candidates, who should have an appropriate honours degree and probably a professional qualification will be required to participate in the preparation of students for degree level examinations, to assist in supervision of student project work and contribute to departmental and [illegible] research activities.

Salary scales: £3,213 to £4,041 (under review) plus £351 London Weighting Allowance and threshold payments as appropriate. Starting salary according to experience.

Further particulars and application forms from the Registrar, Scottish College of Textiles, Netherdale, Galashiels TD1 3HF. Telephone 0896 3151. Closing date for applications 11th July, 1975.

WALES
COLEG HARLECH
Residential College for Adult Education

TUTOR IN PSYCHOLOGY

Applications from men and women are invited for the above post. Applicants should be graduates with a good honours degree. Salary on the scale £3,778 to £5,000 with superannuation benefits.

Further particulars and application form from the Registrar, Coleg Harlech, Harlech, Gwynedd LL46 2PU. Closing date for applications, 11 July, 1975.

Holidays and Accommodation

BROWDONIA

Lleasdis self-catering accommodation for maximum 36, in-terested in outdoor activities on mountains and lake.

Tynllwyd Café, Lake Crest-want, Twelyn, Gwynedd. Telephone Llanuwchllyn 640.

Colleges and Institutes of Technology

LOTHIAN REGIONAL COUNCIL
NAPIER COLLEGE OF COMMERCE AND TECHNOLOGY

Vacancies exist in —

Department of Accounting
SENIOR LECTURER (A) in AUDITING and TAXATION (Reference 1Ac/3/3)
The successful candidate will be in charge of a section of the Accounting Department and will be responsible for the organisation and teaching of auditing and taxation at all stages.

Department of Biological Sciences
LECTURER (A) in BIOLOGICAL SCIENCES (Reference 4Bio/4/14)
To lecture in Biochemistry or Human Biology to Degree, in diploma in Biology and to medical technology students. Successful candidate will be required to assist in the supervision of interdisciplinary student projects.

Department of Banking and Insurance
LECTURER (A) in ACCOUNTING (Reference 1Bl/4/3)
The successful candidate will be required to lecture up to final professional and degree standard.
Applicants should possess an honours degree or equivalent professional qualifications and preferably have had industrial, professional or teaching experience.

Department of Language
LECTURER (A) in ENGLISH and COMMUNICATION (Reference 2Lan/4/11)
To lecture mainly to students with a post-SCE Higher level entry in English following a Higher National Diploma syllabuses in Communication Studies or Communication Arts.
Applicants should hold a degree in English and have experience of working within the communication industry, e.g., in advertising, public relations, broadcasting or associated fields.
Duties to commence 1st September, 1975.
SALARY in the range, £3,216-£6,012 (bar). £6,483 for Lecturer (A); £6,600-£6,735 (bar)-£7,716 for Senior Lecturer (A), with placement according to experience.
Further particulars and application forms from the Academic Registrar (T), Napier College of Commerce and Technology, Colinton Road, Edinburgh, EH10 5DT, to whom they should be returned by 18th July, 1975, quoting reference.

Colleges of Further Education

ESSEX COUNTY COUNCIL

Head of Resources (Administration)

Applications are invited from suitably qualified man or women, with appropriate experience, for this new third-tier post, effective 1 September, 1975, related to a new Institute of Higher Education (Grade 9) which is being established with effect from 1 September, 1976, by the merger of the North-East Essex Technical College and School of Art (Colchester) with the St. Osyth's College of Education (Clacton).

The salary scale will be as for a Head of Department (Grade 3) under the Burnham Salaries Report.

The duties involve the overall responsibility for the planning, development and co-ordination of the administrative function of the Institute; in particular, in the areas of Finance, Building and Grounds, Registration and Examinations, Records, Public Relations and Central Services.

Application forms and further particulars from The Director designate, North-East Essex Technical College and School of Art, Sheepen Road, Colchester CO3 3LL, to whom completed forms should be returned not later than 9 July, 1975.

Colleges of Education

Crewe+Alsager College of Higher Education
(Director—Miss B. P. R. Ward, M.Ed.)

The College is involved in a major diversification programme and is seeking highly qualified and experienced staff for development of its C.N.A.A. degrees.

Senior Lecturer/Lecturer II in Drama (2 posts)
Good academic qualifications are essential and ability to contribute to practical work in both theatre and drama in education method would be an advantage.

Senior Lecturer/Lecturer II in Physical Education
Applicants should hold a higher degree and be qualified in physiology of exercise or motor learning.

Senior Lecturer/Lecturer II in Divinity
Applicants should be good Honours Graduates specialising in modern theology and/or ethics.

Re-advertisement

Principal Lecturer in Human Sciences
To co-ordinate the development of B.A. degrees within the Faculty of Social and Educational Studies and, in particular, to develop inter-disciplinary studies in philosophy, psychology, sociology and other areas of human sciences.

Principal Lecturer in Organisation Studies
To be Head of the Business and Management Studies area (i.e. to co-ordinate developments in Economics, Business Studies and Organisation Studies) and to have a particular responsibility for the Organisation Studies.

Senior Lecturer/Lecturer II in Social Work
Applications are invited from professionally qualified graduate social workers to join the team of Social and Community Studies tutors.

Senior Lecturer/Lecturer II in Special Education
Candidates must have a degree in Psychology and have had experience in at least one area of special education.

All the above appointments will be from 1st September 1975, or 1st January 1976, according to the successful applicant's availability.

Senior Lecturer/Lecturer II posts will be offered according to the candidate's ability and experience.

Salaries:

Principal Lecturer	£5,001 to £5,613 (Bar) to £6,429
Senior Lecturer	£4,206 to £5,010 (Bar) to £5,412
Lecturer II	£2,670 to £4,476 (Possibility of extension to Senior Lecturer Scale)

The College is engaged in work within Categories 2 and 3, and therefore extended salary scales apply.

Application forms and further particulars are obtainable from the Deputy Director, Crewe and Alsager College of Higher Education, Alsager ST7 2HL.

Applications will not be acknowledged unless accompanied by a stamped addressed envelope.

Completed application forms should be returned to the Director, Crewe and Alsager College of Higher Education, Crewe Road, Crewe CW1 1DU, Cheshire, within fourteen days of the appearance of this advertisement.

BRADFORD COLLEGE
Applications are invited for 3 posts of

LECTURER II or SENIOR LECTURER IN SOCIAL STUDIES

Preference will be given to applicants experienced in CNAA degree work who can contribute to work in one or more of the following: Social Work, Industrial Relations, Administration.
Salary scale (under review)
Lecturer II, £2,670-£4,476 p.a.
Senior Lecturer, £4,206-£5,010 p.a.
plus threshold.

Applications immediately in writing to:

The Principal,
Bradford College,
Great Horton Road, Bradford BD7 1AY

and must be returned within 14 days of the appearance of this advertisement.

St. Mary's College, Strawberry Hill, Twickenham TW1 4SX
Principal, Very Rev. T. P. Cashin, C.M.

Lecturer in Mathematics
required for 1st January 1975. The work will be largely at degree level and applicants should have a good Honours degree. Ability to teach applied Mathematics to B.Sc level or to assist in the work of the Philosophy Department an advantage.

Applications should be sent as soon as possible to the Principal and should include the names of three referees.

RICHMOND COLLEGE

PRINCIPAL

The Chairman of the Board of Governors, Vice-Chancellor Edward Maitland Wright, LL.D. (St. Andrews and Penn.), invites applications for the post of Principal of Richmond College.

Applicants must be graduates of a University in the United Kingdom and have had wide teaching and administrative experience in further or higher education in Britain. Experience of the American educational system would be an advantage.

The Principal is responsible to the Trustees and the Board of Governors for efficient administration and continued development of the College and serves as its principal academic officer. Richmond College is independently incorporated in Washington D.C. and derives its degree granting rights from the Board of Higher Education, Washington D.C. Currently the College has 200 residential students, most of whom are American, in the first, second and third year of degree courses. A further 50 foreign students are engaged in English language and pre-engineering courses prior to their departure for U.S. universities.

Salary is equivalent to Grade 5 of the Burnham Scale (circa £8,000 per annum). The appointment will commence as soon as possible.

Applications or requests for more information should be sent by July 14th to the Clerk to the Governors, Richmond College, Friars Stile Road, Richmond upon Thames, Surrey.

CITY OF COVENTRY
COVENTRY COLLEGE OF EDUCATION

TEMPORARY LECTURER for two years in Arts and Crafts in the Department of Art, Crafts and Design.

Candidates should be qualified experienced and/or interested in dyed and printed textiles, dress and embroidery and be providing professional courses in art, crafts and design for students intending to teach in Middle and Secondary schools.

The post which is vacant from September is open to men and women and the lecturer appointed would be expected to take part in the general social and intellectual life of the College. It is a non-essential requirement at present. Salary is in accordance with the Scale for Teaching Staff of Colleges of Education (plus threshold).

Application form and further particulars may be obtained from the Principal, Coventry College of Education, Cantey, Coventry CV4 8ES, (stamped addressed envelope).

SWINDON
THE COLLEGE
DEPARTMENT OF MANAGEMENT

Applications are invited for the following post, duties to commence 1st September, 1975, or as soon as possible thereafter.

SENIOR LECTURER IN MANAGEMENT ACCOUNTING (Ref. : M/5)

Applicants should hold a degree or equivalent qualification and be members of ICMA, the Society of Accountants or similar body. Some industrial and/or commercial experience and have held senior positions in the management of medium-sized or progressive companies.

Experience in lecturing in management accounting and short courses is desirable.

Salary scale: Burnham Senior Lecturer scale, up to £5,010 (plus threshold).

Further details and application forms required by 1st July, 1975) from the Principal, Swindon College, Regent Circus, Swindon SN1 1PT. Please quote Post Reference Number in all communications.

TRINITY AND ALL SAINTS' COLLEGES (R.C.)
Affiliated with The University of Leeds

The Colleges propose to make an appointment of

Lecturer in Human Geography

to take effect, if possible, in September, 1975, or as soon as possible thereafter. The Colleges are currently implementing new courses leading to collegiate degrees of the University of Leeds (B.Ed. Ordinary and Honours; B.A. Ordinary and Honours; B.Sc. Ordinary and Honours), and it is expected that the Department of Geography will play a full part in these developments.

The successful applicant will be expected to share in the teaching of the courses in Human Geography, with special reference to urban and regional studies, including the geographical implications of planning. Appropriate postgraduate research and/or professional experience in those areas would be an advantage.

It is intended that this appointment will be made on Grade II of the Lecturer Scale, £2,670 to £3,822. (under review).

Application forms and further particulars may be obtained from the Clerk to the Collegium, Trinity and All Saints' Colleges, Brownberrie Lane, Horsforth, Leeds, LS18 5ED, to whom completed applications should be returned by 12th July, 1975.

Administration

LONDON
THE ROYAL INSTITUTION OF GREAT BRITAIN
APPOINTMENT OF REGISTRAR

Applications are invited for the new post of registrar in the Royal Institution. The registrar will be responsible to the director for the general administration of the building in the Royal Institution, Albemarle Street, Mayfair, London, and for personnel relations.

The salary will be in the Administrative Grade 7A of a University with responsibility for housing, and the post will be superannuable.

A scientific qualification is desirable.

Further particulars may be obtained from the director of the Royal Institution, 21 Albemarle Street, London W1X 4BS, to whom applications, together with the names of two referees, should be forwarded by July 5. No applications from persons already in post will be considered.

NOTTINGHAMSHIRE
EATON HALL COLLEGE OF EDUCATION
Retford

Principal, E. W. Morgan, J.P.

Appointment of
Bursar/Steward

This position offers excellent opportunities to a person seeking a career in educational administration. It is one of the senior posts within the college and the person appointed will be responsible for academic administration.

Salary will be in accordance with the Burnham Scale for Non-Teaching Staff in Colleges of Education.

Further particulars and application forms are obtainable from the Senior Administrative Officer, Eaton Hall College of Education, Retford, Notts. DN22

Administration continued

UNIVERSITY OF LONDON KING'S COLLEGE
Biophysics Department and Medical Research Council Cell Biophysics Unit

Applications are invited for the post of

ADMINISTRATIVE ASSISTANT

to the Head of Department. Responsibilities cover a wide range of departmental and M.R.C. Unit matters, including preparation of budgets and estimates, accounts, personnel, organization of services and general administrative duties. Administration is supported by a well equipped office and computer facilities

Applicants should be graduates preferably with some administrative experience. The post is available from September 1st 1975 for three years in the first instance.

Salary scale: Administrative 1B, £1,809-£3,285 according to age and experience. Plus London weighting of £399 and threshold payment of £229. These scales will rise from 1st October in line with AUT increases. Membership of USS superannuation scheme is compulsory.

Applications, together with the names of two referees to:
Professor M. H. F. Wilkins, King's College Biophysics Department, 26-29 Drury Lane, London WC2B 5RL.
Closing date: July 7th, 1975.

LEICESTER
THE POLYTECHNIC
ADMINISTRATIVE ASSISTANT required to provide assistance with servicing Academic Boards, associated Sub-Committees, Working Parties and Examination Boards, together with ancillary work involving some executive responsibility for academic administrative matters for the Faculty
Relevant experience within a Polytechnic or comparable institution an advantage but not essential. Applicants should be graduates of a British Institution
Salary £3,156 to £3,756 per annum (under review)
Forms of application and application from obtainable from Staffing Office, Leicester Polytechnic, P.O. Box 143, Leicester LE1 9BH. (Tel. 0533 551551). Closing date 18th July.

Courses

The Polytechnic of North London

INTERPERSONAL
Group and Counselling Skills
for teachers, administrators, social workers, industrial trainers, trade unionists.

Introductory and Diploma Courses 1975/76
Enrolment, 6.30 p.m. Wednesday, October 1, 1975.

John Southgate,
Head of Applied Behavioural Science Division,
The Polytechnic of North London,
128 Camden High Street,
LONDON, N.W.1.

Plymouth Polytechnic offers
POLYTECHNIC DIPLOMA IN EDUCATIONAL TECHNOLOGY
One term courses starting September, January and April
Full details from
The Registrar, Polytechnic, Plymouth PL4 8AA

Colleges and Departments of Art

HERTFORDSHIRE
HERTFORDSHIRE COLLEGE OF ART AND DESIGN
SENIOR LECTURER IN PAINTING
Required for September, 1976. Applications (on forms) as soon as possible to Principal, 7 Hatfield Road, St. Albans AL1 3RS (Tel.: 64341).

Overseas

WESTERN AUSTRALIAN INSTITUTE OF TECHNOLOGY

Applications are invited for the academic positions listed below.

The Institute is a major, rapidly expanding college of advanced education with a current enrolment in excess of 10,000 students. The main campus is on a 240 acre site 6 miles south of Perth.

A particularly wide spectrum of studies is offered. All courses are characterised by a community oriented approach to higher education and there is an emphasis on multi and interdisciplinary approaches. Awards at diploma, degree and post graduate level are made.

SCHOOL OF HEALTH SCIENCES

HUMAN BIOLOGY—TUTOR/SENIOR TUTOR/LECTURER: Teach in areas of human biology in general, with particular emphasis on physiology.

MICROBIOLOGY—TUTOR/SENIOR TUTOR/LECTURER: Contribute to microbiological programmes in general and teach specifically in the fields of medical microbiology and bacterial genetics.

ANATOMY—TUTOR/SENIOR TUTOR/LECTURER: Teach human structure and function to therapy students. A further position with emphasis on neuro-anatomy is available.

BIOSCIENCES—SENIOR LECTURER: Integrate the teaching activities of lecturers in the areas of anatomy, physiology, histology and kinesiology.

BIOMECHANICS—TUTOR/SENIOR TUTOR/LECTURER: Teach aspects of medical biomechanics and physical education to therapy students. Experience in anatomy is desirable.

HEALTH PSYCHOLOGY—TUTOR/SENIOR TUTOR/LECTURER: Develop a programme relevant to the needs of professional paramedical areas and undertake undergraduate teaching in basic psychology with application to therapy courses.

SPEECH AND HEARING SCIENCE—TUTOR/SENIOR TUTOR/LECTURER: Supervise students in a range of clinical settings and teach speech pathology.

PHYSIOTHERAPY—TUTOR/SENIOR TUTOR/LECTURER: (2 positions) (i) Teach and co-ordinate kinesiology and exercise therapy courses. (ii) Clinical supervision and education of physiotherapists within metropolitan hospitals and some teaching in general physiotherapy

OCCUPATIONAL THERAPY—TUTOR/SENIOR TUTOR/LECTURER: (2 positions) (i) Integrate occupational therapy theory and method with clinical experiences and teach in selected areas. (ii) Teach in work assessment conditioning and resettlement and integrate these areas with practice.

PHARMACEUTICAL SCIENCE—TUTOR/SENIOR TUTOR/LECTURER: Teach in either biochemistry, medicinal chemistry or clinical pharmacology.

SCHOOL OF ENGINEERING AND SURVEYING

HYDRAULIC (Civil Engineering)—SENIOR LECTURER: Organise and lead the teaching and development of fluid mechanics and hydraulics and initiate research programmes.

STRUCTURAL ENGINEERING—TUTOR/SENIOR TUTOR/LECTURER: Teach structural design and structural analysis. Further experience in engineering computations areas would be an advantage.

GEOMECHANICS—TUTOR/SENIOR TUTOR/LECTURER: Teach theoretical and applied geomechanics including computer aided analysis and laboratory/field experimental and instrumentation techniques.

CIVIL ENGINEERING—TUTOR/SENIOR TUTOR/LECTURER: Teach in one or more of the following areas: civil engineering construction and management, highways, traffic and transportation engineering, hydraulics and hydrology, public health engineering structural engineering.

ELECTRICAL ENGINEERING—SENIOR LECTURER: Organise and lead the teaching and development of subjects associated with the application of control to engineering systems, including control system identification and system optimisation techniques.

INSTRUMENTATION—TUTOR/SENIOR TUTOR/LECTURER: Teach automated test equipment, data logging systems and programmable instrumentation.

DIGITAL ELECTRONICS—TUTOR/SENIOR TUTOR/LECTURER: Teach digital systems and hardware including application of minicomputers and micro-processors.

ELECTRONIC ENGINEERING—TUTOR/SENIOR TUTOR/LECTURER: Teach analogue and digital systems and the techniques of production for industrial and consumer applications for thick and thin film techniques, design and production.

COMMUNICATION ENGINEERING—TUTOR/SENIOR TUTOR/LECTURER: Opportunities are available in the following areas: data communications, telecommunications system design, microwave/optical transmission systems.

SCHOOL OF TEACHER EDUCATION

THEORY AND PRACTICE OF TEACHING—SENIOR LECTURER: (2 positions) (i) Arrange and supervise field experience and teaching practice in schools and teach in appropriate areas. (ii) Teach units in the analysis of teaching and supervise student field experiences. Specialists in early childhood, primary and secondary education are required.

EDUCATIONAL PSYCHOLOGY—SENIOR LECTURER: Plan units of study and lecture in human growth and development and learning theories.

CURRICULUM AND INSTRUCTION IN SUBJECT FIELDS—TUTOR/SENIOR TUTOR/LECTURER: Opportunities are available in reading, language, mathematics social sciences and physical education.

EDUCATIONAL PSYCHOLOGY, MEDIA, THEORY AND EARLY CHILDHOOD EDUCATION—TUTOR/SENIOR TUTOR/LECTURER: Teach units of the appropriate field of competence as part of the basic core as well as optional studies in courses.

Further vacancies in the schools of SOCIAL SCIENCES, BUSINESS AND ADMINISTRATION and APPLIED SCIENCE will be advertised in this newspaper on 11th July, 1975.

SALARY SCALES: (at the current rate of exchange)—Tutor £St9,4 796-£St9,696. Senior Tutor £St9,845-£St9,745 Lecturer £St9,745-£St9,053. Senior Lecturer £St9,233-£St10,731. Salaries are payable in Australian Dollars.

QUALIFICATIONS: Applicants are expected to have suitable academic qualifications. In addition experience in professional practice of teaching is essential. Appointment to senior lecturer requires a high level of qualifications.

TENURE: Appointment may be either permanent or for a short-term period of up to three years. Generous short-term contracts will be negotiated to suit individual requirements.

CONDITIONS: Fares for family, assistance for accommodation and removal expenses are payable to appointees. Conditions of service include superannuation (similar to FSSU), six weeks' annual leave plus public holidays, three months' long service leave on completion of each seven years' service, sick leave and assisted study leave.

APPLICATIONS: Applicants should state if their preference is for permanent or short-term appointment. Detailed applications, including a curriculum vitae and names of three referees should be submitted not later than 25th July, 1975, to The Migration Liaison Officer, Western Australia House, 115 Strand, London WC2R 0AJ. Further particulars may be obtained from the above address.

When applying please quote reference HE5

THE BRITISH COUNCIL
invites applications for the following posts:
LECTURER IN ENGLISH LANGUAGE (Burma)
maintain of Foreign Language Research
(GRADUATE with T.E.F.L. training and experience. Research degree essential. Under 35. Salary, in scale of the candidate's present employment.
Benefits: overseas allowance; education allowance; leave allowance; contributory pension scheme. Two-year contract, renewable. Ref: 102.
Please give full details of qualifications and experience, quote reference number for further details and send application form and curriculum vitae to: Appointments Officer, Medical Division, The British Council, London W1Y 2AA.

General Vacancies

DERBYSHIRE
REPTON SCHOOL
GRADUATE required to teach MATHEMATICS and/or CHEMISTRY at all levels from January 1976. Accommodation available.
Apply with full curriculum vitae and names of three referees to: The Headmaster, Repton, Derby, DE6 6FH.

LONDON, W.1
Private college requires HISTORY TEACHER to take part-time courses in O and A level MATHEMATICS/SCIENCE/MODERN SUBJECTS/HISTORY.
Please write Box 0634, The Times, EC4P 4BZ.

EDITOR (rewrite, scriptor wanting to edit Journal of Arts Council of Great Britain. Salary £3,000-£3,500. Write by 31st July, 1975, to Secretary, Council of Great Britain, 105 Piccadilly, London W1V 0AU.

SCOTTISH COLLEGE OF TEXTILES
Senior Librarian

Applications are invited from professionally qualified librarians with appropriate experience for the post of Senior Librarian in charge of the library in the Scottish College of Textiles, which is a Scottish Central Institution.

The salary scale is £4,587-£6,252 per annum (eight steps). Preference will be given to those candidates who possess a university degree.

For further details and an application form write to:
The Principal,
Scottish College of Textiles,
Galashiels, TD1 3HF,

to whom completed forms should be returned by 31st July, 1975.

General Vacancies continued

The Cecil Higgins Art Gallery
Bedford

This internationally known Gallery, as a result of a major extension nearing completion, requires:

Assistant Curators (3)
AP3, 4, 5 £2,475—£3,432
Commencing salary is negotiable*

Exceptionally good conditions apply including the provision of housing if required.

* One post requires a specialist in the 18th and/or 19th centuries, the other someone with a particular interest in ceramics and glass, and the third qualifications or experience in the field of water colour and print conservation.

For more information about individual posts see advertisement in this week's Times Educational Supplement.

Application forms and further details are available from Mr B. Bateman, Personnel Manager, Bedford District Council, Town Hall, Bedford. (Tel: 0234 67422 or 0234 52492 if after office hours).

Closing date July 11th, 1975.

Department of Amenities
BEDFORD DISTRICT COUNCIL

Overseas continued

RAF OVERSEAS

Are you interested in STUDENT ADMINISTRATION?
Then earn over
£10,600
In the next two years
TAX-FREE

As part of our important Saudi Arabian Defence Contract, we are responsible for the King Faisal Air Academy where Saudi Arabian cadet pilots receive their education and training.

We wish to recruit a Progress Controller, who will be responsible for programme planning, maintenance of flow charts and student records, and training data.

Applications are invited from men aged 25 to 50, who already possess at least three years' similar experience in an educational institution. They should preferably be qualified to at least HND/HNC level in either maths or statistics.

The successful candidate will receive free bachelor accommodation and messing, medical care and other facilities. We also offer frequent and generous travel-paid home leave, and the contract is renewable after 2 years.

Please apply with brief details of appropriate experience and qualifications, quoting Ref. No. 303/ THES, or telephone Preston 634317.

The Personnel Officer (S.A.),
Saudi Arabian Support Dept.,
British Aircraft Corporation,
Warton Aerodrome,
Preston, PR4 1AX, Lancs.

BAC
BRITISH AIRCRAFT CORPORATION

LECTURERS
Institute of Meteorology King Abdulaziz University Saudi Arabia

The Faculty of Sciences, King Abdulaziz University, Jeddah, Saudi Arabia, has the following vacancies in its Institute of Meteorology, and invites applications from suitably-qualified males.

Lecturer/Assistant Professor: Ph.D. (Met)
with specialization in Synoptic Meteorology.
Lecturer/Assistant Professor: Ph.D. (Met)
with specialization in Physical Meteorology.
Lecturer/Assistant Professor: Ph.D. (Met)
with specialization in Dynamic Meteorology.
Lecturer/Assistant Professor: Ph.D. (Met)
with specialization in Climatology.
Lecturer/Assistant Professor: Ph.D. (Met)
with specialization in Hydro-Meteorology.
Lecturer/Assistant Professor: Ph.D. (Met)
with specialization in Agro-Meteorology.
Lecturer/Assistant Lecturer: M.Sc. (Met)
with good teaching in Meteorology.
Meteorologist M.Sc. (Met)
with good experience in Weather Analysis.
Meteorologist M.Sc./B.Sc. (Met)
experience in handling Meteorological Instruments.
Assistant Meteorologist B.Sc. (Met)
experience in Meteorological observation and plotting.
Assistant Meteorologist B.Sc. (Met)
experience in practical Agro-Meteorology.
Assistant Meteorologist B.Sc. (Met)
experience in practical Hydro-Meteorology.
Chief Observer (Demonstrator) (5)
B.Sc./Secondary School & Certificate in Weather Observations. At least 5 years' experience in observational and plotting duties.

We are in fact looking for well-qualified, experienced and energetic persons to work in our Science Faculty. Very attractive terms and conditions of service are offered under the revised pay scales.

On receipt of applications we will communicate our detailed terms and conditions of service to those candidates whom we find suitable.

Please apply in confidence with detailed bio-data and photostat copies of certificates/degrees/testimonials. Applications should be addressed to The Dean, Faculty of Sciences, King Abdulaziz University, P.O. Box 1540, Jeddah, Saudi Arabia, clearly mentioning the post and department for which the application is made. All applications must be received by July 31st 1975.

Selected candidates would be required to join the Faculty at Jeddah by 1st September, 1975.

On finalization of selection, contract will be executed through the Saudi Arabian Cultural Attaché in London or New York as the case may be.

Saudi Arabia

AUSTRALIA
SWINBURNE TECHNICAL COLLEGE
PRINCIPAL
Applications are invited for the position of PRINCIPAL Technical College consequent on the retirement of the present incumbent, Mr. H. Major.
The Technical College is a division of Swinburne Colleges of Technology, a unified and complete complex in Technical and Further Education (TAFE). This includes apprentice, trade technician, Diploma, technician and preliminary year (sixth form equivalent) courses. The present enrolment is approximately 6,000 of whom approximately 400 are full-time.
Applicants should possess a degree or diploma or its equivalent professional qualification, in addition they should have proven managerial and administrative ability and a wide experience in technical education.
Relevant industrial experience, particularly in the field of industrial training, would be an advantage.
The Principal will be responsible to the Director for the planning, direction of the Technical College.
The salary for this position is currently $18,000. An increase of 3.6 per cent as a result of current wage determination is pending.
Further details about the position may be obtained from the Director, Swinburne College of Technology Ltd., at the address shown below.
Applications, in duplicate, should be sent to: The Registrar, Swinburne College of Technology Ltd., John Street, Hawthorn, Victoria 3122, Australia, no later than 31 July, 1975.

Reminder
Advertisements should reach The Times Higher Education Supplement by the Friday prior to publication for classified display advertisements and 10.00 a.m. Tuesday prior to publication for bookings and semi display.

WESTERN AUSTRALIA
MOUNT LAWLEY COLLEGE OF ADVANCED EDUCATION
Lecturers in Special Education (2)

Applications are invited from suitably qualified persons for the above positions.

The College is establishing a course leading to a Graduate Diploma in Special Education. Successful applicants will be involved in the development and teaching of programs and units, the focus of which will be integration of theory, research and curriculum into classroom practical teaching.

In addition to the high level formal qualifications and appropriate experience, the successful applicant must present evidence of initiative and capacity for innovation and research.

Salary Range: $A11,655-$A15,644
(approx. £6,760-£9,070)

Details of conditions of service and application forms may be obtained from:

The Migration Liaison Officer,
Western Australia House,
115 Strand,
London WC2R 0AJ.
Tel. 01-240 2881.

Applications will close on July 25, 1975.

Announcements

THE OPEN UNIVERSITY
COMMITTEE ON CONTINUING EDUCATION

The Open University has recently set up a Committee on Continuing Education, under the chairmanship of Sir Peter Venables, with the following terms of reference:
1. To make recommendations on the nature and scale of the University's contribution to the national development of continuing education, including professional education and training and to the educational well-being of the community generally, as set out in the objects of the Charter.
2. To establish with appropriate timescales, plans for the phased development of a long-term programme of continuing education, to estimate the resources needed for the implementation of the programme and to propose a structure for the organisation of the programme.

An Interim Report is planned, probably for December 1975, on which comments from individuals and educational, professional and other bodies will be requested for submission to the Committee by March 1976. In the meantime the Committee would greatly welcome the submission of views in relation to its terms of reference and in particular to the following questions:
What may be the role of the Open University in the provision and support of adult education, other than for mature students taking first degree courses?
What educational needs are not being satisfied at present, or are likely to develop in the next decade, which could be met by the Open University acting either in collaboration with other institutions or agencies or on its own?
Proposals for collaboration would be of particular interest to the Committee.
Submissions should be sent as soon as possible and preferably not later than 31st August, 1975, to the Secretary, Committee on Continuing Education, Open University, Walton Hall, Milton Keynes, MK7 6AA, from whom further information about the Open University's present provision is available on request.

Librarians continued

THAMES POLYTECHNIC
ASSISTANT LIBRARIAN
(£2,874-£3,444)

Applications are invited from graduate librarians for a post of Assistant Librarian with special responsibility for Business Studies and Sociology in a rapidly developing academic library 20 minutes from central London.

Further particulars and form of application may be obtained from the Secretary, Thames Polytechnic, Wellington Street, London SE18 6PF, to whom completed applications should be returned by 8th July, 1975.

MIDDLESEX
THE POLYTECHNIC
ASSISTANT LIBRARIANS

AL1 based at Hendon—with supervisory duties at Cat Hill, Barnet, North End Road N.W.11 and Trent Park, New College of Speech and Drama. Duties include responsibility for records, stock maintenance and co-ordination; developmental of libraries in the Faculty; material for Drama and Performing Arts in general. Administrative duties.

Applicants should be professionally qualified Librarians with two years experience and a degree. Evidence of interest and accomplishment in the Performing Arts is essential.

Salary Scale: APS £5,097 to £5,478 (under review).

AL2 Based at Hendon. Duties include: cataloging; short loans; supervision of Circulation; classification; general assistance in other duties.

Salary: Librarian scale £3,426 to £3,630 (under review).

Please state clearly which post you are applying for.

Write for an application form and further details to The Administrative Officer, Ref: A&S, Middlesex Polytechnic, Queensway, Enfield, Middlesex, EN3 4SF, to whom completed forms should be returned by the 31st July.